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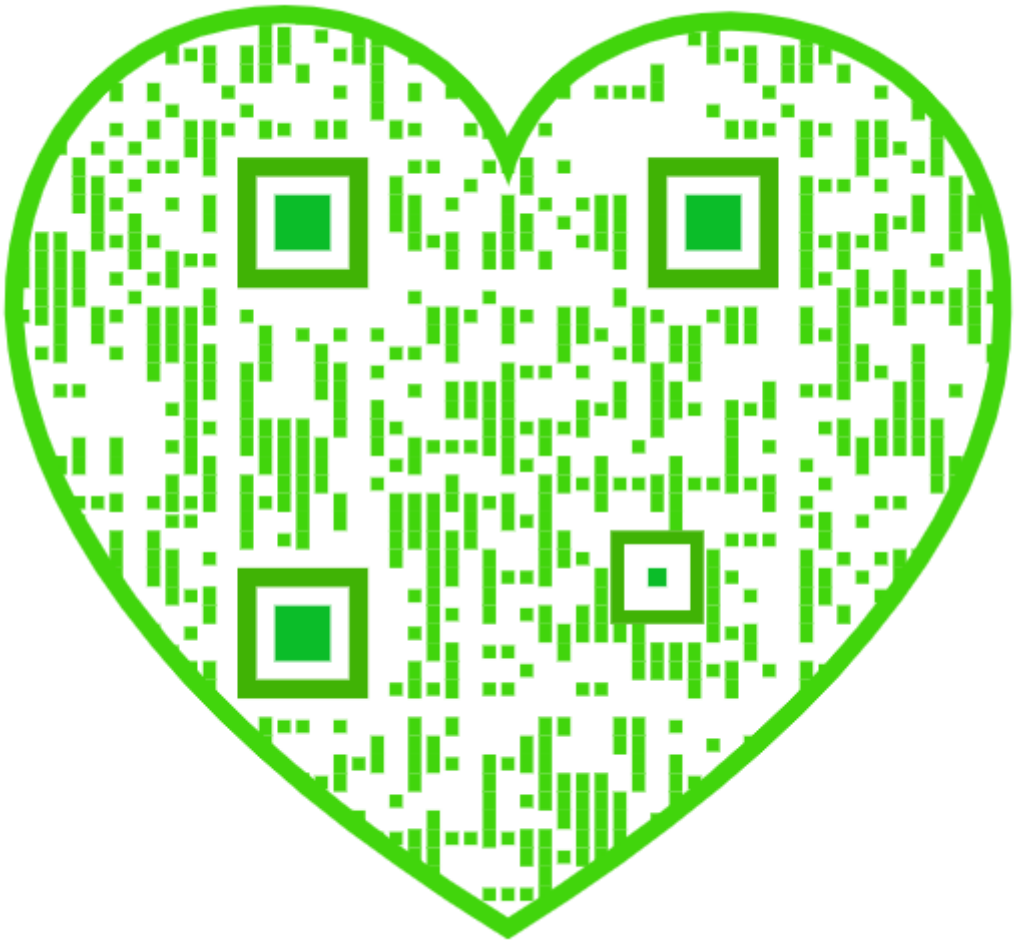

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AND BEE-KEEPERS' ADVISER.

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Editorial, Notices, &c.

1894—ITS PROSPECTS FOR BEE-KEEPING.

During the twenty-one eventful years which have passed by since the BRITISH BEE JOURNAL first began its task of labouring for the cause of bee-keeping, we find it difficult to recall one which at its commencement appeared so full of interest to the pursuit as the year now before us. After advancing step by step in the march of progress, we have now reached what may be termed the business stage, and in this particular department there is so much to be done by way of improving or developing the present condition of things that no one whose heart is in the cause need be fearful of not finding exercise for such superabundant energy or zeal as he may happen to possess.

We refer, of course, to the purely commercial aspect of the case, and it may be said regarding this that it is perfectly clear that in these days none can afford to stand still and hope that success will attend them. We must move on or some one of the many strivers in the race will push past us. This fact comes forcibly home to the British bee-keeper in the efforts now being made by our brethren—and we must not forget that they *are* our brethren—in all parts of the world to get hold of our home market for honey. This "foreign competition," now so prominently coming to the front, is, we must bear in mind, perfectly legitimate if honestly conducted, and must be met fairly and squarely on its merits. Besides it is by no means confined to our little industry of bee-keeping, but permeates almost every trade and industry in the kingdom, and there are few crafts having so good a case for hopefulness that things will eventually come out right as that of bee-keeping. And so, while admitting that the foreigner may undersell us (we cannot alter that fact), our duty lies in endeavouring to prevent him from trading on our good name. This we may do without inflicting wrong or injustice on any one.

Beyond noting with much satisfaction that Bee Associations as well as individual bee men are rising to the occasion, we need but to add here that in our pages for the last few weeks will be found plenty of matter for thought, all bearing directly on the subject and plainly showing how desirable it is that a well-directed effort should be made in order to place the question of British honey production on a vastly improved basis. With the various communications in our pages—directly referring to the question—before them, it will be less difficult to think out remedies for the abuses and, as our friend "The Heathen" would say, "abnormally" crooked things requiring to be made straight. But these straightenings are not entirely confined to the "foreign" question. As will be seen in the correspondence, there are some things nearer at hand which need "sorting." A very apt illustration of this has just reached us in the form of a letter addressed—let us say in perfect good faith—to a firm who are dealers in honey, by the British producer from whom they obtained supplies. By suppressing all names, as we are bound to do, no injury is done to individuals, but the original document, which lies before us, clearly vouches for the genuineness of the case. The letter is as follows:—

November 1, 1893.

DEAR SIR,—Please send what empty crates you have on hand, so that I may refill them and send you. Regarding the honey I am

seuding you, I would like you to know that the bees, besides gathering honey from flowers, have been fed with sugar-syrup with the intent of increasing the yield. Although I have never had any complaint of the quality of the honey so made, which I belive to be satisfactory, I have made up my mind either not to feed the bees so again or sell the honey as so made. You must understand that the bees convert the syrup into honey in the same way as when extracting it from flowers.

The honey I intend sending you is well sealed, and is of the same quality as you have had from me in the past, which, I have no doubt, has given every satisfaction to your customers.—I am, yours truly, ——.

Notwithstanding the very natural indignation which it is to be hoped will arise in the breasts of all thoughtful bee-keepers on perusing the above, we must give the writer credit for his intention to "either sell his honey as so made" (*i.e.*, syrup-fed), or give up syrup-feeding for the purpose of increasing the yield. We also accept as sincere the expression of his very erroneous belief that "bees convert the syrup into honey." And we are glad to give him an unqualified assurance that bees do no such thing. Also to inform him that sugar-syrup is sugar-syrup only, whether swallowed and regurgitated by bees or not. Having given him this assurance, we charitably hope that he will discontinue what is not, and cannot be, other than a nefarious and dishonest practice, calculated to do serious harm to an otherwise legitimate and delightful pursuit.

There will be abundant opportunity for the full discussion of whatever projects may be formulated for the purpose of remedying the evils connected with honey selling, and it is to be hoped that readers will show their interest in a matter which so directly concerns themselves by freely expressing their views. The establishing of a thoroughly efficient system of placing the home grown product before the British public, and of enabling the latter to easily distinguish between it and the foreign article is the task which faces the British bee-keeper of to-day, and if this task is successfully accomplished, a service will thereby be rendered to a now heavily handicapped home industry, which will be both real and permanent.

Referring to the need for keeping abreast of the times, we trust that the alteration in our present issue will be generally approved, and with renewed hopes that a year of usefulness for ourselves and success to the craft lies before us, we start hopefully on another year's labour.

BRITISH BEE-KEEPERS' ASSOCIATION.

Meeting of the Committee, held at 105, Jermyn-street, on Wednesday, December 20. Present, T. W. Cowan (in the chair), Hon. and Rev. H. Bligh, J. Garratt, J. H. New, Major Fair and J. M. Hooker, ex-officio, John Huckle, Secretary.

Communications were received from the Rev. Dr. Bartrum (who had previously attended a Sub-Committee meeting), Rev. G. W. Bancks, and H. Jonas, regretting their inability to be present.

The minutes of the last meeting were confirmed and signed.

The Secretary reported that he had written to the several affiliated Associations urging them to solicit the support of the several Agricultural and Horticultural Societies within their respective districts, and that the following had acknowledged the receipt of this communication, viz.:—Herefordshire, Shropshire, Derbyshire, and Nottinghamshire.

A letter was read from Mr. F. H. Meggy offering to assist the Committee in any steps that might be taken to bring the industry of bee-keeping before the Board of Agriculture. The Secretary was requested to communicate with Mr. Meggy, and to thank him for his letter.

The Chairman reported, on behalf of the Educational Sub-Committee, that Mr. T. S. Elliott, of Southwell, Notts, and Mr. G. Franklin, of Ryton-on-Dunsmore, had passed the second-class examination. In the special examination of a knowledge of "foul brood," Mr. R. French, of Leamington, had also been successful.

Resolved—"That the next meeting of the Committee be held on Wednesday, January 24."

Members desirous of making nominations of members for election on the Committee for the ensuing year should make application to the Secretary for a nomination paper. In accordance with the rules of the Association each member of the Committee must be nominated by two members of the Association. Nominations must be made not later than January 27.

HUNTS BEE-KEEPERS' ASSOCIATION.

On Saturday afternoon, December 16, a meeting of the Hunts Bee-keepers' Association was held at the Fountain Hotel for the purpose of distributing the prizes won at the Huntingdon Show in July last, and general

business. Lord Sandwich presided, and there were also present : The Rev. C. G. Hill (Hon. Sec.), the Rev. H. S. Budge, Messrs. A. W. Marshall, C. N. White, E. Allen, W. H. Woods, Z. Hobbs, R. Brown, W. Ellis, Mrs. Allpress, and Mrs. Shelton.

The prizes were distributed as follows :—

E. Allen, 15s. ; W. H. Woods, 15s. ; R. Brown, 14s. ; Mrs. Allpress, 14s. ; H. J. Bull, 11s. ; Mrs. Shelton, 2s. ; Z. Hobbs, 4s. 6d. ; W. Ellis, 10s.

In the course of a discussion which followed on the subject of Bee Lectures delivered in the county, the Rev. C. G. Hill said he must remark with regard to the lectures that were given that he wrote to all the clergy of the different parishes. He got what rooms he could for the lectures, but he did not carry out Mr. White's recommendation as to lectures being given in all villages, because he had to find the room, and if the clergyman thought that bee-keeping would not be of any use there, he (Mr. Hill) did not like to press it very strongly. But if there was any wish that the lectures should be given he would endeavour to carry out the recommendation.

In replying, Mr. White observed that in his opinion there was an opportunity now of extending their little association, and spreading the knowledge of bee-culture. In fact, there was a better opportunity now than ever existed before. Two of the district committees had been kind enough to give a grant of £10 each, and he suggested that the time had come when they should go before all the committees and ask them to place bee-keeping amongst the subjects of technical instruction. He proposed that the district committees be approached with a view of getting bee-culture placed amongst the subjects of technical instruction.

Mr. Marshall seconded the proposition, which was eventually carried.

The Rev. C. G. Hill said bee-keeping was a sure indication of a man being above his fellows, and if they could encourage people to do something a little more scientific than usual they ought to do so.

Mr. Hobbs said he could conscientiously tell them that bee-keeping was a great benefit to him, and when a poor labouring man had to toil all the week for 11s., and had a wife and family dependent upon him, and a home to keep up, it became those who knew what would benefit him to advise him to follow their example. He quite agreed that the Society ought to spread the knowledge of bee-culture as far as possible. The more the knowledge was spread and the more it was practised, the better it would be for the agricultural labourers and cottagers throughout the country. He felt bee-keeping should be encouraged, and that quite as much good might be done that way as by teaching boys to carpenter, women to wash, and girls to cook.

The Chairman referring to the remarks of Mr. Hobbs said he was quite sure the County Council Committees would carefully consider any application to assist bee-keeping, but he must defend the County Council against any possible attack for not giving money, because they had heard that day that they gave money and it had not been spent. He did not think, under the circumstances, that the County Council or their district committees could be expected to do more. With regard to what Mr. Hobbs had said about cooking, nursing, and carpentry, they must remember that the object of the County Council was to spend the money for the good of the greatest number. Although he did not say that bee-keeping was not an excellent subject for the expenditure of the technical education money, he could not allow the subjects in which the Council did instruct to be put in any way behind bee-keeping.

A vote of thanks was accorded the Chairman, and the meeting then terminated.

(Communicated.)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The Editors of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "The Manager, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of Advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1687] The record making or breaking year of 1893 is ended ; Christmas, with its joyous gatherings in the home circle, is passed, and we again look forward with hope to the New Year. At this time, the advent of the year, we make our resolutions ; make, as it were, a new start in life, leaving the old ways behind, and pressing forward to a better, to a higher standard in all that concerns our calling, our work, our life. With this number we start a new volume of *our* Journal. I say *our* as a good part of the B. Journal is made up of correspondence from bee-keepers, and I trust this part will continue to be even more so in the future than it has been in the past. Please think, friends, that the most trivial items of bee news and doings in the apiaries will be interesting and helpful to some one—perhaps a beginner may find the simple fact a veritable stepping-stone to success. And if new ideas puzzle the brain of the tyro in the craft, possibly a similar train of ideas may have been worked out by some one else years

before, and have been recorded in past volumes of BEE JOURNALS, to such our Editors are ever ready to give attention and advice; and where such ideas start out on a new, untried path, the B. B. J. ought to be the recipient, as some slight acknowledgment for the great and manifold benefits it confers on bee-keepers as the years glide by.

What is this new idea of Mr. Simmins, as per advertisement column: bees swarming in March and April—is this to be a real fact, or will it prove a will-o'-the-wisp and elude our grasp just as we think the have it well in hand—this method will only be of use in very forward districts in very forward seasons. Of what use will a swarm of bees be in March to the bee-keeper in agricultural districts, except as a novelty? then what of the young virgin queens, how are they to become fertile? as, I take it, the weather will be too cold to induce drones to take wing, even if such is produced abnormally; and, even if drones are on the wing, there will be every probability of inbreeding. If the system, whatever it may be, prevents spring dwindling that will be some comfort, but bees swarming or ready to swarm in March and April! Well, no thank you, Mr. S., not for me, they would be worse than useless to me, as their keep for some three months would land them so deep in debt to their food provider that the short period of their working life in June would never repay.

If any known method will ensure each stock of bees to reach the "boiling over" point at the opening of the first honey flow that method is *the method* for practical bee-men who wish to make a profit of the pursuit.

The district will determine in a very great measure when stimulation of brood rearing should begin. If a large quantity of sycamore trees are near the apiary endeavour to have the bees in condition to take advantage of the pretty sure flow of honey from this source; or if extensive fields of turnip or swede-seed is grown, then strive to be ready to reap the first honey harvest, and, in fruit districts, even an earlier harvest may be gathered, provided the labourers are ready in sufficient numbers to collect the sweets of nature, and at the same time increase the crop of fruit for the horticulturist by the perfect fertilisation of the blossoms

Lecturers' errors are receiving attention and ought to do so. I opine the errors are more of the *lapsus linguæ* type than errors of ignorance. Very often we find men who are well posted, in fact, thoroughly conversant with a subject on which they can talk fluently and intelligently to one or two in conversation, feel themselves at a loss for words when addressing a large audience; in this state of embarrassment the wrong word will slip out, and the cool, collected, listening critic, who is ever ready to find fault, pounces on the offending word and shows it up in print. Some eighteen months ago, I was asked to form one of a committee, in connection with our C.C., to decide on what subjects would be most suitable to be taught by means of lectures under the Technical Education Scheme, and I impressed on our C.C. that lecturers, if they would reach and teach the labourers the first series of lectures on whatever subject, should be of the most elementary kind for the simple reason that they would be talking to men who had mainly started work after passing the Third Standard examination, and the elder lads after passing the Fourth Standard. Now what would technical terms convey to an audience composed principally of scholars such as these? My contention is that after a course of lectures has been given in a district, that to be of any permanent utility classes should be formed in a central village, to which those who are interested in any one subject can repair and continue the study of that subject, in conjunction with kindred spirits, under a good teacher paid out of the grant; then, in a few years, we should have a class of men well up in any subject which they have studied. But for educated lecturers to come into villages and use scientific phrases and technical terms would simply place their subject above the reach of ninety-nine out of one hundred of the audience.—W. WOODLEY, *Beedon, Newbury.*

AMONG THE BEES.

[1688.] ARE VICIOUS BEES THE MOST PROFITABLE TO KEEP?—The affirmative to this is a very prevalent idea among many bee-keepers of the present day, though, according to my experiences, somewhat an erroneous one. The two qualities—viciousness and industry—seem as opposite in character in bee-life as it is in that of human. No doubt there are many vicious colonies that give a very good return, and so there are as many mild-tempered colonies that give equally as good an account. The one characteristic does not follow the other, and are anything but synonymous.

I have made it my duty for many years to weed out of my apiaries all colonies showing a preponderance of irritability; in consequence, I never upon any occasion have to use protection when working among the bees, surrounded as I am on all sides by strong, active colonies. I do not, of course, mean to assert that my bees never sting—far from it; but that a minimum amount is received, considering the number I keep. We professionals have to handle bees of all sorts, vicious (very much so) and otherwise. Many a colony have I seen that resented even the approach of a man, horse, dog, or fowl to within 6 ft. of the hive, yet rarely do we find such colonies profitable—frequently, no doubt, from the fact that few people care for the job of attending to their wants owing to this irritability, but I think mostly for the reason that irritability and industry do not, as a rule, go

hand in hand with bees, or, in fact, any other living creature.

One of the quietest colonies of bees I ever handled in my own apiary gave me over 140 lb. of super honey in one season. This was a single, not a double or "Wells" hive. When I say that I removed at one operation five racks of sections and a shallow super without using a subjugator of any description, it will give a fair idea of their temper when handled properly.

We cannot possibly take a single instance as the foregoing as a proof of any contention or argument, but the above experience can be multiplied in my own case over and over again. Depend upon it a quiet, industrious colony will give a far larger return than an irritable, bad-tempered stock which resents any interference at any time with the outside of the hive much less with the in.

I note that Mr. Bunney (1670, p. 500) in very satisfactory terms mentions "quiet half-bred Ligurians." The stock alluded to above was of that variety—that is, a Ligurian queen crossed with an English drone; a cross I have always held to be very difficult to beat both for quietness and industry.

Carniolans.—Mr. W. A. Nicholls (1668, p. 499) gives his experience of Carniolan bees. I remember some five or six years ago dining *tête-à-tête* in Liverpool with one of our editors, Mr. W. B. Carr, and having a very long chat with him *re* Carniolans. He had then not long received a colony or two from Carniola, and didn't then say very much in favour of them. I don't know whether his opinion has changed. From the results of this chat I imported several dozens of queens both from Mr. Frank Benton and another dealer. I "Carniolanised" a lot of my stocks, and ran them for two years, but got so disgusted with their swarming proclivities that I made a regular queen-killing raid upon them the third year. Without doubt, speaking as a dealer, they are the finest variety of bees for a queen-rearer who trades in them to keep. You can get queens and swarms "galore"—no trouble about absence of swarms or paucity of queens. I had eight swarms (?) from one colony in a single day, each about the size of one's fist. Why, it was quite a little excitement in the apiary while those Carniolan stocks were there, and seemed to raise the spirits of all who had to keep an eye upon the apiary for the issue of swarms. You can quite understand the excitement. I pay 6d. to anyone on the place who first catches sight of a swarm. I had at last to get an account-book in which to put down the various sixpences I had to "shell out" at the end of the week. But, alas! those sixpences never came back in honey.

Advocates of the Carniolans say there are Carniolans and Carniolans. Well, all I can say is that I got hold of the Swarming Carniolans; though it is a very peculiar thing that out of the dozens I had I always managed to miss t'other sort. That's what I suppose they call ill-luck; anyway, I am so satisfied with my ill-luck that I wouldn't for the world attempt to try the other luck.

Carrying Bees on Bicycles.—My letter on this subject has drawn forth one answer (1673), though I fear me its contents are but a repetition of the adage "An ounce of practice is worth a ton of theory." Does not Mr. Cribb know that his plan is the one always practised by every bicyclist having to carry anything on a bicycle? It's just the plan I intended to convey in my letter, I had heretofore always adopted but had discarded in favour of the new and improved (greatly so) system. When I say I am greatly obliged to Mr. C. for allowing me the honour of his commendations *re* some slight superiority of my plan over carrying the bees supported on the bicycle in boxes, but it is inadequately expressing the feeling of deep obligation I am under to him for his trouble in putting forward the old style. As to carrying the bees on the bicycle, I left it to the ingenuity of the bicyclist. I simply published the description of package most suitable for packing on bicycle and rider in quantities most likely to be carried, and not for just a pound or two, that is all. Now, as to Mr. C.'s fault-finding with that package; well, it's just theory again. I wrote on my manuscript $\frac{5}{32}$ in. for diameter of holes in zinc, the Editors published that measurement, the printer made no error; that is the measurement (five thirty-seconds of an inch), and if Mr. C. can "crowd" an English, Ligurian, or Carniolan bee through a circular hole of that diameter I'll say the package is no good. Yet, it is strange, I have received more than one letter advising me that a bee can get through an opening $\frac{5}{32}$ of an inch wide. Yes, I'm perfectly well aware of that; but, here's the secret, if the opening is circular it can't. You see, the larger the holes—consistent with safety—the better the ventilation. Now about the bag. If Mr. C. can't make a bag of canvas 28 in. in circumference fit round a 6 in. square of zinc, let him get a lady to do it. I know the ladies of the present day make the sleeves of their dresses—which I often see more than 28 in. in circumference—fit round the armholes in their dress-bodies, which are much less than 6 in. in diameter.

Again, no assistant is required in "sacking" the bees, unless the "sacker" is wofully clumsy, and if Mr. C. will "go in" for practice without theory, he will find that to "sack" a dozen lots of bees but two-thirds of the time will be occupied than by his method of running them in the boxes—really an almost obsolete style—and pasting paper over the ventilators before so doing.

One more grumble Mr. Editor. The zinc is perfection, no wire gauze is needed, as that would stifle the bees. Even the ordinary size perforated zinc will do. The bees can be fed (how often is this necessary?) just as easily through the zinc in the bags as through the gauze in the boxes. Kindly note, the whole of

the above is deduced from practice pure and simple.—W. B. WEBSTER.

IMPROVING THE "W.B.C." END.

[1689.] Allow me to endorse the remark in your Editorial of December 21, that the nature of my advocacy of "H. C. J.'s" contentions must be judged by my communication (1,630, p. 505) as a whole, and not alone by the quotations given by "H. C. J." in his letter last week (1,674, p 505).

I deprecate the tone of his letter, and think he carries his contention too far. My own advocacy of a spur on the "W. B C." end being limited to cases where, otherwise, this end could not be adopted without hive alterations. It was for such cases alone that I argued against the objections to the spur being judged fatal, in order to gain what I think are the many advantages of the adoption of the "W. B. C." end.

Your clear review of this question, and my respect for the experienced opinion of "W.B.C." authorship, will, I think, lead me, in my own budding apiary, to adapt any hives requiring it to unmutilated "W. B. C." ends, instead of making "spur" sets of ends for these hives. especially as I should feel bound to mutilate in this latter case their present valued title!

Having aired our views, and occupied your space and time, I feel sure "H. C. J." will join with me in practising the laudable advocacy you ask for at the conclusion of your article.—"F. S.," a Lancashire Novice.

BEES IN SHROPSHIRE.

[1690.] It is not often that your valuable paper records an echo from this county, and although I am rather of a reticent nature, I feel at times I cannot hold my peace. The past season has been a memorable one for the district; everywhere came reports of overflowing supers, of grand honey, so fine that our bee-keepers have secured places of honour at several shows in the country. Even in Scotland have we been represented, and came out well to the front, so that we Salopians are mighty proud. I have read with feelings of regret the correspondence in the *Journal* on "Lecturers' Errors," and fail to see what possible good can come out of it. Experts are put through a thorough examination before they can secure their certificates, and second-class experts must be thoroughly practical men. Surely Associations would not send out men who are not capable of expressing themselves; or men likely to make such errors as they are credited with? In every audience we find boasting critics raady to seize an any *lapsus linguæ*, and at once try to ventilate their criticism, and indirectly tell an Association of intelligent men that the person sent out to represent them is an ignoramus, although he holds their certificate. Yet these critics are quite willing to accept "wrinkles" from them; but "to err is human." What a stupendous advance in the "*Bees*ness" would take place if these "Anarchists" would secure a "second class" certificate and come forth as lecturers. Let them try it and feel how mighty small they are.

So far our winter has been an extremely mild one. All kinds of buds are in a very advanced state, and an early spring predicts itself, yet there is plenty of time for the proverbial "nip." Our little friends' stores will be sadly diminished, and it will be well to keep an eye on stocks. A peep through the feed hole, weather permitting, cannot do any harm, when it can readily be seen if there are sealed stores; if not, a 2 lb. cake of candy will drive away our fears. A cottager with two frame hives asked me to look at his stocks; he stated that one was defunct. At the first look I was quite alarmed. The entrance was completely blocked with dead bees, and I drew out with a bent wire quite half a pint, and then came several as lively as fleas and all right, with plenty of sealed stores in the hive. I could only conclude they must have got "nipped" with the frost, as one night we registered 10 deg. after a warm day. I am afraid before we are again in full swing reports of defunct stocks will be prevalent, and I would strongly advise examinations to be made earlier than usual this year (if possible). And now, Messrs. Editors, allow me to wish you a happy and prosperous New Year, and that your valuable paper may never grow less is the wish of—SALOPIAN.

ARE VICIOUS BEES THE MOST PROFITABLE COLONIES TO KEEP?

[1691.] Mr. Bunney in BRITISH BEE JOURNAL for December 14 (1670, p. 500), raises the above interesting question on which nearly all bee-keepers can give an opinion. I have kept bees for eleven years, beginning with one hive and having now over one hundred, and I strongly claim that the fact of a hive being either vicious or gentle has nothing whatever to do with the yield of honey *provided* the treatment of each is similar. The great majority of small and inexperienced bee-keepers (I do not include Mr. Bunney, who is remarkably successful) handle the bees and open the hives far too often, especially if a stock is mild tempered. Now, such bee-keepers never willingly overhaul a *savage* stock unless it is absolutely needful, and the result is that because left alone they do better than a mild stock. It is surprising how very seldom it is really needful to pull a stock to pieces. Although when I first began bee-keeping I thoroughly examined each hive two or three times a week, I now find that two or three times a season is all that is required. By keeping a hive on a scale I have found that bees will sometimes gather 7 lb. of honey in a day, but I should like to know how much they would bring in if the hive had been opened and all the frames turned about and

the plans upset. By paying constant attention to the honey-gathering abilities of each hive, and only rearing queens from such stocks, I have succeeded in getting a strain of bees very superior to what I began with, and I have hopes of very soon getting all my stocks to gather as much as my best hive used to do. Mr. Bunney hits another nail on the head by saying his stocks turned out well, especially "where there were young queens." As I have mentioned before in BRITISH BEE JOURNAL, I try to re-queen every stock each summer, and although it is no light task to raise 100 choice queens yearly, yet I have never regretted the labours. — EDWARD J. GIBBINS, *Neath, Glamorgan.*

EXTRACTING WAX.

[1692.] I have now great pleasure in replying to "Buzzing's" queries (1678, p. 507) anent the above. I fear he will think me rather a long time in doing so, but I must confess that, what with Christmas festivities, &c., I could find no time to write ere this. I will now answer the questions in the same order as they were asked.

I. I allowed the contents of jar to cool before clarifying, so that I could the easier separate the wax from the offal, for I found that when I tried to strain the mixture immediately after its first removal from the oven the strainer became so clogged with the impurities that only a very little would run through, and even the little that did was so full of globules of thin honey, which was in the comb previously to melting, that the wax was unsaleable. If the contents of jar be allowed to cool upon removing from oven, as advocated in my letter (1537, p. 347), the pollen and other foreign matter can easily be cut off from the wax, and the thin honey drained off. The wax can soon be clarified now, for if it be remelted it will freely run through the strainer, be it of muslin, cheese-cloth, or a wire one of fine mesh, especially if it (the strainer) be well warmed immediately before use, as this helps the wax to run through freer. Of course, if "Buzzing" finds his plan to answer, I should advise him to stick to it; but I hope he will let us know the results.

II. Of course a large tin, either circular or square, would do instead of a jar; but seeing the jars cost me nil, and the tin vessels I should have to buy, I use the jars, and so save a shilling or two.

III. If "Buzzing" refers to my letter he will see that I obtained at least two-thirds more wax than I did formerly, when I extracted by tieing my wax offal in a muslin bag and boiling for several hours. I did not say I could get two-thirds more wax by my method than if I had used an extractor.

Allow me to congratulate you, Mr. or Mrs. "Buzzing"—which?—upon your obtaining about three pounds of wax by adopting my plan, notwithstanding you found it, you say, rather a muddling affair. If others have tried my plan, I should be glad to hear if they were successful or otherwise. By the bye, Mr "Buzzing" whereabouts do you buzz? If in this neighbourhood, I shall be pleased to make your acquaintance.—PERCY LEIGH, *Stoke Prior, Bromsgrove, December* 27, 1893.

BEES IN CO. KILKENNY.

PREVENTING ROBBING.

[1693.] Robbing may be effectually stopped as follows:—Take a strip of perforated zinc (not queen excluder) and cut an entrance ¼ in. or ⅜ in. each way, not quite in the centre of the piece; slip the ends of this under the ends of the hive slides when opened full width; then take another such piece and cut an entrance in it also, but not opposite the one already placed in position. This is placed outside of slides, and fastened with two small tacks. If the slides are made of ⅜ in. or ½ in. stuff I have now that space between the two zincs. If the robber succeeds in passing the first zinc he is sure to knock himself against the inner one, and is captured by the guards. Should he succeed in getting in through both doors, and is returning with the stolen goods, as soon as he gets clear of the inner door, in his hurry and excitement to escape, he bobs his head against the outer zinc, and is made a prisoner of and dealt with in accordance with apiary law, which is rather summary in its operation. With this device the bees get the advantage of having only to guard the ¼ in. or ⅜ in. entrance, while they have the full-width door for the purpose of fanning or ventilating, so necessary in warm weather, especially with excited stocks, which is the case always where robbing is going on. In cool weather the slides can be closed by drawing the two tacks without removing the zinc, but the tacks should be again inserted.

This is my plan, and it has succeeded when every other that I read of or could invent failed. Now, friends, whenever the necessity arises, try it, and I have every confidence it will succeed if the attacked stock has any fight or energy in them at all.—M. K., *Piltown, co. Kilkenny, December* 29, 1893.

ABNORMAL.

[1694.] Even now, breaking the solemn stillness of the night, the bells are ringing in the New Year, and ringing out one of the most extraordinary bee years that has ever been known. It commenced with an abnormally fine and early spring, and right up to its close has been distinctly abnormal. During the warm days so frequent at the close of the old year, bees were out, and I fear many a little rover was tempted to venture so far from home that, like the ship people sing of, they "never returned."

On the 23rd, the 24th, and on Christmas Day, bees were abroad in numbers, but the Boxing Day "outing" took the (candy) "cake" as a bee day; so much so, that a native chancing to pass in front of my hives, remarked to his pal, "Bless me, Billy, if them bees ain't a-makin' 'unny."

For my part, I don't like things abnormal; I prefer them normal; for, with a season like that of 1893, one is puzzled what to be up to. Mignonette in flower at Christmas; carnations coming into bud; roses—with last year's leaves not off yet—starting into growth again; self-sown seedlings of hardy plants, showing their tiny seed-leaves above the ground, appear to inquire in their sweet, silent way—Where's winter? The dandelion, forget-me-not, cowslip, oxlip, and primrose have started into renewed life abnormally, and the bees are out, young and old, at play to welcome Father Christmas in mufti (in spring array). In fact, things have got out of joint somehow, and I am led to inquire, When will winter come? Will it drop on us in March, April, or May? and, if so, What then? Where are the weather prophets? Echo answers, "Where?"

Continuing my view of things abnormal, I ask—What is to be the price of English honey if seasons are perverse and foreign competition continues? especially if our leading pioneers of bee-craft lend a helping hand to place the foreign product on the British market at 4½d. per lb.! whilst English honey practically goes begging at a fair price? One thing I can say, and that is, if people only knew how some of the foreign honey was got from the combs, that commodity would lose a portion of any toothsomeness it may possess, for extractors are—to use the words I myself heard let fall by a bee-man resident not 100 miles from Honolulu—"Darned things not worth fussing with."

Another item I am led to class among the things which bee-keepers should hope are abnormal is the stuff we sometimes see imposed on the public by some leading firms as "finest English honey" (*vide* price list). Quite recently I was induced to buy a jar of this precious nectar, said jar being supposed to contain "about 1½ lb. of honey, price 11½d." (still quoting price list). Before going into the quality of the article bought, the *quantity* struck me as "abnormal," for the contents, when turned out of the jar, barely weighed ¾ lb.! Now, Messrs. Editors, I quietly got your opinion of this "pure new honey," and you at once declared it to be in such "fermenting condition as to be unfit for table use." We quite agreed on *that* point. Doesn't this state of things require bringing back to normal condition if British honey is to sell?

Of course, the weather we cannot control, but some cure can surely be found to remedy some of these other little matters which are "out of joint" a trifle. At any rate, should we not endeavour to get our native product placed before the British public in a palatable, wholesome form at as low a figure as possible? Unless bee-keepers do this, foreign competition is to be feared, but certainly not otherwise.

Some steps should be taken by British bee-keepers as a body, or as a number of minor bodies acting under one head, to protect themselves and their industry; and, in my opinion, it is for the B.B.K.A.—which has, I know, men of ability and energy amongst its members—to evolve some scheme which will tend to put things, if not seasons, more in tune, and so, amongst other things, bring a calm to the spasmodic oscillations in the head-feathers of others besides those of—THE HEATHEN.

Queries and Replies.

[927.] *Candy Making.—Wiring Shallow Frames.*—I enclose a sample of candy made under directions in "Guide Book," but its appearance struck me as peculiar. I thought it ought to have been dull white, not yellow and transparent as at present. 1. Is this candy in a right form for bee-food? If not, can I dissolve the cakes and boil afresh, or must I get another lot of sugar? 2. Do you advise "wiring" the foundation in shallow frames? For extracting some this year I found that nearly every other comb broke from its attachments in the operation of extraction. 3. Ought shallow frame foundations to be as thin as sectional foundations, or thicker when used for extracting only, and of what colour should the foundation be?—"HARTWOOD," *Chorley, December* 23.

REPLY.—1. You have failed in carrying out concisely the instructions given in "Guide Book." After removal from the fire the liquid should be allowed to cool a little and then be kept stirred constantly until it begins to set or become stiff. This stirring causes the mass to become white and opaque, instead of yellow and transparent, as sample sent. Remelt it and try again. 2. We have never found any need for wiring shallow frames, because of never having had a break-down such as you mention; but we always use thick brood-foundations for extracting combs. If our method of handling caused the combs to break down we should wire them. 3. Thin foundation is not suitable for extracting combs, nor is the colour of the foundation used of any importance.

[928.] *Removing Supers in Winter.—Supers for Exhibition.*—Being busy at the close of the bee-season, I find I have left on one of my hives a super of seven full frames of honey. This hive has nine full frames in body of the hive. 1. Shall I do harm by removing super now—by causing undue ex-

citement—or would it be safer to leave it till the spring? 2. At the same time kindly tell me how the supers are worked for show purposes, so that no frames are seem, neither where the comb has been attached to a frame? Am sorry and also surprised, after all that has been said the past few weeks respecting importation and use of foreign honey, to see the same advertised in this paper by a firm of manufacturers. Where are we to sell our honey at the 8d. and 9d., as some correspondents assert, when the columns of the BRITISH BEE JOURNAL advertise foreign at 4½d.?—H. L., *Garboldisham, December* 24.

REPLY.—1. The super, if clear of bees, may be removed at any time. If, however, there are bees in it, a warm day must be chosen, when the bees are on the wing. But be quite sure there is food enough left below. Unless there is a queen-excluder above the frames of brood-chamber, the super should not be left till spring, as the queen may have ascended in the meantime. 2. The combs of show supers referred to are not built in frames, but simply attached to the roof of the super, which is turned bottom upwards, and thus displays only the lower edges of the combs. With honeycomb designs, on the contrary, the foundation forming the design is fixed to the glass top, and the super or "design" is staged just as it has stood on the hive whereon it was worked.

Echoes from the Hives.

"*Honey Cott*," *Weston, Leamington, December* 27, 1893.—The weather here now, and for some time past, has been stormy and mild; bees have been flying nearly every day. On Christmas and Boxing Day they were out and off for water, as though (if they have not already began to breed), they were thinking about it. I saw several wall-trained trees of winter jessamine and furze in bloom yesterday. In the shade the temperature is 43 deg. to-day, very different to the weather we had this time last year, but as we are not out of the wood yet we must not begin to cry out, as there is plenty of time for a good long winter; but I like my bees to have a good chance to fly at this time of year. Wishing all friends a happy and prosperous new year, JOHN WALTON.

BEE-KEEPING AS AN OCCUPATION FOR WOMEN.

In giving a glance backward over the past 20 years of my life, nothing strikes me more forcibly than the wonderful change made in the world's opinion of labour for our sex, and in the opportunities and openings for women who do not wish to be idlers in life, and for those who must be bread-winners.

Twenty years ago women crept tremblingly along in one or two occupations—teaching and sewing. Now she stands out proudly, surveying the many fields of different labour lying at her feet, and only seeks to select the one to which her strength, tastes, and finances naturally lead. From the higher professions, and those requiring long mental effort and training, many a woman may still be debarred from lack of health and strength to bear the confinement of study, and with only small capital may wish an occupation still intellectual and refined, yet having the rigour of outdoor life, and the demand for little capital in its beginning. To such I come with a plea in favour of a pursuit which has brought me health and strength, has given me golden opportunities for study of the beautiful and useful in nature, and has also had a very satisfactory effect upon the size of my purse.

If there is one person in all this broad land of ours who has a right to be an enthusiast on the subject of bee-culture I certainly am pre-eminently that person. A poor dyspeptic, who for years could not eat anything that had a drop of grease in it, or drink even a spoonful of that delicious beverage—coffee—without the most dire results following such imprudence; I can now eat almost anything with impunity, which change has all been brought about by active outdoor exercise, working with the ever busy little bee. Haven't I a cause, then, to be an enthusiast, think you, upon this subject?

One great advantage in this occupation is, it can be carried on right at home, in our very dooryards. Another is, it takes but little capital to begin with—less than, perhaps, almost anything else in which a woman could embark.

In 1888 my bees gave me a ton of honey gathered from the tiny flowers of the hoarhound alone, and two tons from other flowers, making in all 6,000 lb. of honey, 100 lb. of beeswax, and 33 per cent. increase, bringing the number of colonies up to sixty; since which time I have made no increase, as that is as many as I can well manage with other work. Remember, this was the outcome of one colony of bees in the spring of 1880.

Gathering the honey is gleaning that which is going to waste, and would otherwise be a complete loss. Did you ever think of how many things are going to waste, which a hand careful of minor details could garner in and make profitable?

In the beginning of my work there were plenty of persons, as there always are, ready to discourage me, and I was often told I could not find a market for my honey. This was all a mistake, for I have not been able to supply the demand. The largest order I ever received was for 1,030 lb., and I am satisfied that is the largest amount that ever has ever left our county (Bell) in one shipment. I have made this statement before, and will repeat it, that I believe if all the honey that is secreted by the flowers in our "Lone Star" State could

be gathered by the bees, there would be honey enough for every person in the State to have all they could eat, three times a day, every day in the year. What a great blessing this would be for many a poor child who never gets a taste of that God-given sweet in a lifetime.

If we cannot scale the mountain tops, we can go into the humble walks of life and be gleaners in the valleys, study the wants and necessities of our bees, and have them in a condition to save that which would otherwise go to waste. With the aid of my bees I have saved many tons of honey that otherwise would have evaporated and been lost.

To the refined woman, whose nature revolts against any occupation which brings with it no outlet for busy thought and keen relish for the beautiful, bee-culture offers a pleasant, elevating opportunity for study as well as pecuniary return. It brings us in close contact with Nature and Nature's God. There are new beauties all the time coming to view. Even the despised weeds take on a new form of beauty, never before dreamed of. Take, for instance, the hoar-hound—one of the bees' great food providers, but which is ordinarily looked upon as a great nuisance. Put this insignificant-looking little flower under a microscope, and look at the wonderful beauty of God's handiwork. You will doubtless feel ashamed that you ever regarded it as a nuisance. When you also know of the innumerable millions of bees it supplies with honey and pollen, upon which the bees feed their young, and that the tons of honey it yields supplies abundance of this delicious sweet for the use of man (woman is included), our contempt for this common weed is changed to admiration. These are the beautiful lessons I learn daily from my little bees.

The study of bee-culture is almost limitless. There is all the time something more to be learned. By the use of an observatory hive everything that is done inside a large hive can be seen, and much learned in this way. I would advise every one who keeps bees, either for pleasure or profit, to have an observatory hive. It is like an index to a book, and about as indispensable to a successful apiarist. I keep mine on my gallery, and can tell whether honey is coming in either freely or scantily, without having to open a large hive.

Poultry-keeping combines very nicely with bees, as most of the work comes on at different seasons of the year. After the bees are snugged away nicely for the winter, there is no more work with them until spring, and not much very early in that season, and at this time the chicks should be hatched for the most successful rearing. I began the fine or fancy poultry business at the same time I commenced with my bees, and have kept them right along together, and find little conflict between the occupations. I have raised from seventy-five to 250 chickens per annum. Of course all are not show birds. The culls find a ready market upon my own table, for we do like nice fried chicken, and almost always have plenty of it at all seasons of the year. Nice, fresh eggs—we wouldn't know how to get along without them, either.

I have five varieties of chickens—Houdan, White Houdan (which originated in my yard), White-crested Black Polish, Silver Spangled Hamburg, Black Langshan and Houdan. I also have a few crosses between the Langshan and Silver Spangled Hamburg and Langshan. These are very fine, hardy, thrifty birds, and would be a fine cross for those who do not care to keep the pure breeds.

Dampness is the greatest enemy that I have found. This can be prevented by having dry quarters for them, both old and young. Keep their houses cleaned at least twice a week—every day is better. Keep constantly a supply of clean, fresh water for them; give them plenty of wholesome food with an abundance of green stuff; make good nests for them, and they will surely shell out the eggs—pure fresh ones—not such as you usually get from your grocer.

I believe in chickens, and intend to have them as long as I have ten square feet of land upon which to keep them. They pay me well as a financial investment, besides adding luxuries to my own bill of fare.

If in this limited review of these two occupations so well adapted to home-life and the retirement so dear to many women occupations, which have given me so much pleasure as well as good, hard-monied profit, I should happen to assist any dependent woman to helpful thoughts for self-support, I shall feel more than repaid for this little effort in presenting Bees and Poultry as a womanly and profitable home-business.—MRS. S. E. SHERMAN, *in American Bee Journal.*

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

F. C. (Crewe).—We should not question the genuineness of sample sent, nor its being Irish honey as stated: in fact, regarding the latter point, it is impossible to *locate* the source from whence honey is gathered, but it is coarse in flavour and quality, and in our opinion dear at the price named. We trust you will bring before the tradesman referred to the fact that really good British honey may be had through county Bee Associations at a figure equally low to that named.

C. H. (Kent).—The honey sent is from mixed sources—chiefly, as we think, white clover. There is no trace of heather in it. The quality is fairly good.

Editorial, Notices, &c.

USEFUL HINTS.

WEATHER.—The weather of the opening days of 1894 will come as a rude awakening to those who prognosticated for bee-keepers a winter so mild that stores would be exhausted before bees had got the usual quieting-down which accompanies winter's frost. Only the other day we were in the midst of warmth and sunshine, with what should have been spring flowers bursting into premature bloom, and bees in many places flying as in the summer time.

The following description of the weather on the south coast from a London daily paper of the 27th ult. is worth recording. It reads: — "The weather at Dover and on that part of the coast was of such an extraordinary character on Monday and yesterday as to be unlike anything in the memory of the oldest inhabitant at this season of the year. The sun shone with great brilliancy and warmth, the thermometer registering 60 degrees. The scene both at sea and on shore was like that on a midsummer day. The influence of the genial weather is having a very marked effect upon the trees and bushes, which are re-budding, and primroses and violets are bursting into blossoms generally."

So much regarding the last week of 1893, which may truly be termed the year of sunshine, for according to another contemporary "the year 1893 was, atmospherically speaking, about the brightest year of the present century. The automatic recorders to test the amount of sunshine, gave 1,686 hours as the aggregate for the year, or 333 hours, about 25 per cent., in excess of the normal—practically an addition of an hour per day throughout the year. The most brilliant period covered ten successive weeks to May 13, the duration being 472 hours, representing nearly 7 hours per day, and 72 per cent. above the normal duration. In the last week of this very bright period there were no fewer than 80 hours of bright sunshine, as against 64 hours in the excessively hot week of August. At Bunhill-row, in the heart of the City, the returns for the month of April showed a total of 216 hours, the average being 107; the actual duration, therefore, was slightly over double the normal. For the same month Greenwich had 231 hours, and Kew 244, these figures being by far the highest registered at these stations in April. The western suburb had at the rate of over 8 hours per day of sunshine."

Now, considering how few days have elapsed since the advent of the New Year, it is just as interesting—by way of illustrating the fickleness of our climate—to note and to place on permanent record the weather conditions of to-day, when the country is covered with snow to a depth of several inches, and the thermometer in London on the 5th inst. fell to a lower point than it has done for many years. On that night in the outlying suburbs of the Metropolis, ten degrees above zero Fahrenheit—or twenty-two degrees below freezing point—was registered. The fall of snow has also been accompanied by such icy cold winds as to render it quite "blizzard"-like. Bad, however, as has been our experience of the severity of the cold, things have been far worse abroad. In Germany the temperature has been almost that of the Arctic regions; in Berlin on the 5th inst. the thermometer fell two degrees below zero, or thirty-four below freezing point; while at Thorn, on the Vistula, and several other places in the Province of Posen, thirty-nine degrees of frost were registered, many persons being frozen to death there. In parts of France the cold has also been intense, with snow-storms everywhere. At Chaumont, in the Haute Marne, thirty-six degrees below freezing was registered on the 4th inst., and many of the rivers are frozen over, while all the great rivers are covered with immense blocks of ice.

In all parts severe snow-storms are reported, and along the coast the effects have been very disastrous, so the New Year has lost no time in making up for the want of wintry force so remarkably absent in the closing days of its predecessor. How long the present trying weather conditions will last, who can tell? Anyway, deponent will not even hazaard a guess, and the weather prophets join us in being prudently silent.

WIDE ENTRANCES IN WINTER.—Before quitting that very seasonable topic "the weather," let us say how frequently during the last few days have our thoughts turned to hives in exposed situations, the entrances to which are regularly left open 8 in. or 10 in. wide all the winter! With drifting snow carried by the fierce gusts of wind in blinding clouds as fine as dust—entering the houses here in Kent, under doors, through keyholes, and between any but the closet-fitting window-sashes—we have felt for the poor bees exposed to the fury of such storms, and have been, meanwhile, truly thankful that our own bees have had *their* trials in this repect reduced to a minimum by reason of having all entrances contracted to little more than a single bee-space for several weeks past. Had the entrances been left wide open, as many are, we should have expected to see the whole space below the combs filled up with drifted snow. At the time of writing all entrances are completely snowed-up, and will be left so for the present; there is plenty of ventilation between the hives and outer-cases, and though all communication with the outside is cut off, the bees will be all the better for it while the severe weather lasts.

IMPROVING THE "W. B. C." END.—As a final word on our part, concerning this controversy, we print the following recent note from the manufacturer of the "W. B. C." End. Mr. Meadows writes:—"I do not know if you think it worth while for me to be personally mixed up with the 'End' controversy, but I have just turned up a letter from yourself, written to me some five years ago, which I enclose as showing how firmly fixed were your objections to a spur on the end at that time. I also send you an old tin end with spur made at the time the W. B. C. was being worked out, and you will remember the spur was rejected, after being fully discussed and a lot of time spent over it in 1888-9. Time has since proved your contention to be right. "For the first year or so after the W. B. C. End was introduced, I fought the 'spur' question out at shows with hundreds of people. Of late years, however, I find it is only those who have recently taken up bee-keeping that wish for a spur. Our friend 'H. C. J.' had better take the advice of that universally esteemed bee-keeper, the late William Raitt, who recommeneed beginners to 'make haste slowly' in altering what pioneers in the craft leave alone.

"It should be a sufficient proof of the utility of the 'W. B. C.' End that the number made and sold has increased each year since it was first brought out, and in no single instance has it in any way been found fault with by those who have had large practical experience, which alone enables anyone to prove its worth."

As Mr. Meadows is without doubt the most likely person to know if the desire for a "spur" has been frequently expressed by users of the End, we thought the above unsolicited testimony on the subject might be considered as fairly conclusive.

EXUDATION FROM LEAVES.

From the *Journal* of the Royal Microscopical Society we see that the late Professor Pasquale records the occurrence of the fall of a quantity of fluid in the form of small drops from the leaves of lime-trees. The phenomenon is no way connected with the production of manna as the result of the attacks of aphides, but resembles the process which takes place normally in *Cæsalpinia pluviosa* and some other trees. It takes place only during the period immediately preceding the opening of the flowers, when the vital processes are most active, and when the transpiration from the leaves is not sufficient to eliminate the whole of the water absorbed by the soil.

M. E. Guinier, in "Comptes Rendus," describes a similar exudation from the leaves of an orange-tree.

LECTURE ON BEE-KEEPING AT CHINGFORD.

Mr. J. H. Howard, of Holme, Peterborough, has been engaged by the local Technical Instruction Committee of the Essex County Council to deliver a lecture on Bee-keeping, in the Parish Room, Chingford, on Monday, February 5 next. The County Council having purchased a set of Messrs. Newton's lantern slides, these will be used to illustrate the subject, as well as a good many appliances lent by a local bee-keeper. Mr. Howard purposes following the syllabus drawn up by the British Bee-keepers' Association for the use of technical lecturers, and with his well-known practical knowledge and ability as an exponent of agriculture, a most entertaining and instructive lecture may confidently be anticipated. The proceedings commence at 8.30, and the admission is free.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The Editors of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "The Manager, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see* 1*st page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

AMONG THE BEES.

[1695.] Lecturers and Teachers.—The gentleman who signs himself "Not a Heathen," has written one of the best letters (No. 1684, p. 515) upon this subject that has appeared for some time, although some of his views are somewhat in opposition to those usually accepted when dealing with a matter affecting all classes of a community so large as that located in the British Islands.

I feel almost inclined again to quote "quot homines," &c., which quotation gave so much offence to one who, perhaps inadvisedly, adopted the vernacular in his communication (No. 1671, p. 599), appearing in issue of 14th ult. No, I will not; but will humble myself still more, and advance another as follows:—"Nemo mortalium omnibus horis sapit." To return to "Not a Heathen." The writer seems to be under the impression that there are but two classes in this community—viz., educated and totally uneducated. If he will but think awhile, it will no doubt dawn upon him that these two classes each represent but a unit in the community. There is a much larger class by far which he has overlooked—a class which, I venture to assert, outnumbers either of the other two as five hundred or even a thousand to one. It is the fairly educated who happen to be blessed, or otherwise, with but a scanty allowance of that commodity known as "the root of all evil." Can *they* look after themselves? Can they obtain the services of a private tutor upon any technical subject? I quite agree with "Not a Heathen" that *one* of the County Councils' duties is to "take care of the uneducated." But, first, I want to know, uneducated in what? Does "Not a Heathen" mean in the three R's, bee-keeping, trigonometry, hedge-carpentry, entomology, joinery, poultry-keeping, or what? I think your correspondent must have written "educated" for *wealthy*, "uneducated" for *poor*. These terms seem to have got somewhat mixed. If it is so, I agree with him entirely.

As is well known I have had the pleasure to lecture upon bee-keeping in nearly every part of the British Islands, both for the B.B.K.A. and County Associations, and so I may perhaps be allowed to give pretty accurate information as to the class of people attending such lectures. From these experiences I can safely assert that rarely do we find one among an audience who does not understand a lecture delivered, not in the vernacular, but in the the everyday language of a fairly educated person, avoiding technicalities, yet where unavoidable explaining same as the lecture proceeds. But a lecture does not end here; the lecturer is always called upon after the lecture to give explanations to, say, a person having had a collegiate education, yet upon the subject before him quite uneducated. Again, another inquirer more frequently met with, a person fairly educated unburdened with riches, is he not upon certain subjects, one of the uneducated? is he to be debarred from participating in the advantages offered by the County Council? Yet would he care to sit and listen to a lecturer who is ordered to reach the understanding of one among the audience addresses the whole venacularly in a lecture replete with tautology, mispronunciations, grammatic errors or errors of the subject treated upon? Is it not apt to throw discredit upon the organisers of the lecture, and to the audience digust the subject of same?

In the last paragraph of one of the letters (1684) "Not a Heathen" writes, "the sooner the County Councils bribe an intelligent bee-keeper" . . . . "to teach bee-keeping." Well, I don't like that word "bribe" at all. I have looked up its meaning in several dictionaries, and find it means "to seduce," "something given to pervert justice and judgment." Now, I can't bring my mind to think that "Not a Heathen" would so far forget himself as to assert that all bee-keeping lecturers and tutors are willing to be bribed. I remember, as a lad at school, having to write several hundred lines, a Latin quotation, which, translated, reads as follows: "To be led by bribe is next akin to robbery," as a punishment for accepting a slice of cake from a little boy, as a bribe to punch a bigger (less than myself) boy's head! Since then I've had kind of dismal recollections of the word, and fully appreciate its meaning.

Hive Roofs.—Not often enough a letter from the pen of "Lordswood" appears in these columns. I always follow his pleasingly descriptive writing with a pleasure generated by a passionate love of the country, its air, its lanes, woods, flowers, and fields. Well do I know the parts described by him in a letter anent hornets (1655, p. 479). Foxlydiate Woods, Bromsgrove, the Lickey Hills, Tardibigge. But a few weeks ago I was careering along the road on my "bike" from Redditch to Astwood Bank, and thence to Bromsgrove and Birmingham—Birmingham but an hour's hard ride, what a change! Well, I'm getting away from the subject of hive roofs (1683, p. 514). "Lordswood" writes, wood as roofs won't keep out the wet; he is quite right. Wood *will* warp, it *will* expand and shrink, and the

bees suffer in consequence. Plenty of paint put on at autumn improves matters a deal, but three seasons after without paint means wet quilts. I don't, though, look forward to having zinc or tin roofs in the future. I handle a couple of zinc roofs in my apiary, and always threaten to do away with them when I have time. When in a hurry one is apt to cut one's hand with the sharp edges. You mustn't nail the zinc on or it will buckle tremendously. My roofs are secured with zinc straps soldered on across the underneath corners of the hive roof proper; the wind gets underneath and blows the zinc up and down, making a pleasant little tum-tum, though not at all conducive to the necessary rest and quiet required by the occupants of the hive during winter. You can't get it to lay tight anyhow, as zinc, a deal more than wood, expands with the heat and refuses to contract to any appreciable extent. If it is too much trouble to keep hive roofs regularly painted, just prepare them as they do the roofs of railway carriages, I'll guarantee no wet gets in them, and with a coat of paint once, say, in five years, will last as long as zinc. I don't like metal roofs. "Lordswood" can see some at the "big house" at Great Alne, not a great way from his locality; they are covered with sheet-lead. I know them; I have to lift them off and on; I don't believe that there is one roof among the lot that weighs much under half a hundredweight! One advantage can be claimed for them, I never remember one being blown off or a hive overturned. Metal roofs are much too heavy, no matter what description of metal is used. That railway carriage roofing, as the Yankees say, "fills the bill."—W. B. WEBSTER.

A CHANGE FOR THE WORSE: A BEE PUZZLE.

[1696.] I have read with very considerable interest the articles in the BRITISH BEE JOURNAL upon the—what seems to me—very broad question, "Are Vicious Bees the most Profitable to Keep?" I did not sit down with the intention of writing either for or against, because it seems to me that endless instances might be quoted on both sides, based on practical experience, which goes to prove that no satisfactory conclusion can be arrived at.

But what caused me, Mr. Editor, to take up my pen was the words "vicious bees." It instantly made me think that I might put before you one or two facts in regard to my bees which "stagger" me, and for which I shall be only too glad if some fellow bee-man would kindly try and explain. I suppose I had best begin to unfold my "puzzle" by stating that I commenced bee-keeping some four years ago, and have during that time kept only one kind—the ordinary black.

I wish you, bee friends, to lay particular stress on the fact that my bees have—or, alas! I must now say had—a very even, well-balanced temperament; I suppose they had good digestions. They never troubled me in the slightest degree until last year, in the middle of it. But to explain. Spring operations were gone through, with a minimum amount of stings, bad bee language, &c. By "bad bee language" I mean the peculiar tone of an irate bee's "hum," which is so easily distinguishable from one in an ordinary frame of mind. I trust you will pardon this digression, Mr. Editor. May arrived, stocks were doubled, and as I was leaving the country for at least six weeks I gave them plenty of surplus room.

The six weeks went by, and I returned; but oh, what a change! The first hive did not wait for me to take the roof off—not they; they issued in one long, continuous black stream, similar to swarming, and came straight at me. Very luckily—the result of an after-thought—I had at the last minute put on veil and gloves. There was no mistaking their intention; they beat in impotent fury on the crown of my hat, and when they discovered it was wasted energy they went straight for some poultry cooped up about 20 yards off, and vented their rage on the poor birds, the result being that one old hen was unable to get over the shock, and died next day. Her body—this need not be taken *cum grano salis*—was literally a pin-cushion. It would have been well if this were all; but the "insects" then went for a maid who was attending to some clothes, and she was so badly stung as to be obliged to keep her bed for some days. One fact, Mr. Editor, struck me as remarkable—all the other stocks had this sad derangement of their tempers, and joined in the fun (from a bee's point of view), although their hives were not *approached*.

Now, this is the conundrum, bee friends, that beats me: Why on earth should these bees' temperaments undergo such a change, especially when I tell you that they were left *absolutely* to themselves, during my enforced absence? And the lamentable fact remains that the bees have never regained their once charming dispositions, and are to-day, or were a few days ago, when I gave some candy, as bad-tempered as on that never-to-be-forgotten day in July.—Yours truly, HARTWOOD, *Chorley, January 5.*

BEES IN DUMFRIESSHIRE.

[1697.] I again take the opportunity of sending you a few details of the season's bee-keeping in this district. Bees came through the winter well, and with the fine weather we had in the spring they increased rapidly, and were supered between a fortnight and three weeks earlier than last year. There was, however, but little surplus stored till about the end of May, when the supers began to fill rapidly, and those who were working their bees in frame-hives reaped a splendid harvest of from 45 lb. up to 116 lb. per hive. Straw-skeppists,

on the other hand, were a long way short, and, notwithstanding the splendid season, they made rather a poor show. They would probably get from 10 lb. up to 25 lb. per skep. But the Bar-frame method of bee-keeping is spreading rapidly, and in the course of a few years the straw skep will be a thing of the past in this district. Honey was in good demand, and our best 1 lb. sections and good samples of extracted honey were making one shilling per pound; other lots realising tenpence per pound. Bees went into winter quarters generally in good condition owing to the splendid weather we had in the autumn, which gave all those who required to feed a good opportunity to make sure that their stocks had plenty of food for the winter.

Our Association here is making good progress, and we have a meeting every month at which methods and appliances are discussed and criticised, and much valuable information is given and received, and I may say it is mainly owing to the efforts of our Association that bee-keeping is making such rapid progress in this district.—NITHSDALE.

EARLY SWARMING.

[1698.] In "Notes by the Way" (1687, p. 3) I notice your esteemed correspondent, Mr. Woodley, makes several remarks upon my "Early Swarming" pamphlet, and doubtless you will kindly allow me to refer in a few lines to his statements.

While I show how it is possible to secure the swarming condition in March, I have not failed to point out that the latter part of April is soon enough for most bee-keepers. I am quite sure that Mr. Woodley will agree with me that a stock properly wintered contains as many bees at March 1 as usually cover the full hive of brood in May; but in the meantime, why is there so little actual increase in numbers? for the extended cluster shows only an apparent increase—the higher temperature allowing the bees to maintain the required warmth without the dense packing previously necessary.

My object has been to show that hitherto the winter cluster has been broken up by stimulation, which does not in its results justify the wholesale loss of life among the adult bees between that time and the full development of the brood-nest. As a matter of fact, stimulation need not be begun so soon as generally practised.

Mr. Woodley will, I think, also agree that if swarming is required by the bee-keeper who desires also the largest amount of honey, it should be carried out before the harvest is expected to begin; and that two good stocks quite ready for the first flow will pay better than one, and that one, in too many instances, not even ready when the season does open.

In the south we expect bees to gather more or less honey throughout the month of May; five out of six seasons they require no feeding during that month, and frequently the most forward stocks get their own living during the latter part of April, without considering the remarkable year of 1893; though certainly no season ever more clearly disclosed the fact that innumerable bee-keepers relied upon the bees' own endeavours rather than such management as would have increased the number of workers, and consequently the amount of honey yielded.

There is really no need for three months' wasteful feeding, but it is a question whether the bee-keeper prefers to be prepared with stocks strong enough to feed themselves, or others in a backward condition requiring far more attention.—SAMUEL SIMMINS.

CARRYING BEES ON BICYCLES.

[1699.] My letter (1673, p. 505) setting forth the plan I practised for carrying bees on a bicycle was written primarily for the benefit of a bicyclist who evidently did not know of it, although Mr. Webster asserts, in your issue of the 4th (1688, p. 5), that every bicyclist always practices it. I have used the method now for four years with success, and can bring the bees from eight or nine skeps by its means. The bees don't get stifled with the gauze (more practice, Mr. W.), and I never said I ran them in, but "can be shaken into or run into the boxes." I shake them in (more practice, Mr. W.), and neither do I paste any paper (evidently your theory, Mr. W.), but surely any one with common sense will see that the double operation of transferring the bees to a bucket must take a little more time than the single one of shaking the bees out of the skep into the box, which, by the bye, does not require any holding by any one. Also the theory that the perforated zinc is perfection is absurd. I send you a full-size illustration from a maker's catalogue of 5-32 hole zinc, and also one of the wire gauze I use. In a square inch the gauze has a clear air space of ·68 of an inch, whilst the zinc has only ·043; this in a piece 6 by 3, which equals 18 square inches, clearly shows that the gauze gives a clear air passage of 12·24 square inches against 7·25 in the zinc, thus the ounce of theory of Mr. W. that the bees would be stifled by the gauze is ridiculous, as well as incorrect, as proved by the ton of practice. I always keep driven bees in confinement in these boxes for a day or so, and feed them with medicated syrup, as experience has taught me that "prevention is better than cure." I am sorry I have so overloaded Mr. Webster with such deep obligations, &c., and hope they will not hurt him, any more than my acknowledgment that I was mistaken regarding 5-32 as being large enough for a bee to get through hurts me; but if every time any one in a desire to give other bee-keepers the benefit of any little wrinkle or device they have successfully used is to be sneered at and heckled, we shall soon

see an end to many of the useful and interesting letters which appear in the BRITISH BEE JOURNAL, which as the media for the exchange of opinions, is so valuable to all bee-keepers. Mr. Webster is under no obligation to use the same method of carrying bees as I do, neither is any one obliged to use his method. The old proverb says, "There are more ways of killing a dog than hanging him."—F. J. CRIBB, *Morton, Gainsborough.*

THE NEW METHOD OF HANGING FRAMES.

[1700.] According to promise, I send you a hive for your inspection and opinion, and the same of the members of the B.B.K. Association at their next conversazione. The hive is an old one, and the fittings made by hand, and consequently are not quite as perfect as can be produced by machinery ; but you will see the idea.

The hive is sent from my country-house, to which place I shall be pleased for you to return it at your convenience.—H. B., *Sheffield, December* 20.

[As the next quarterly conversazione of the B.B.K. Association does not take place till February next, it will, of course, be some time before you will hear the result, and we shall reserve our own opinion till after the meeting. The hive has reached us all right.—EDS.]

LECTURERS' ERRORS.

[1701] Judging by the correspondence that has appeared in the columns of the BRITISH BEE JOURNAL anent the above subject, I should say that the unfortunate "Bee" who has caused so much discussion has not been having a very happy time of it. I do not know the cause of so much activity among "bees" so late in the season ; it is the time of year when they are usually very quiet, but perhaps the mildness of the weather has something to do with it ; neither can I understand why they should show such a spirit of antagonism toward a member of the same hive, but, whatever the cause, it appears to me that they seem inclined to be just a little bit vicious, and also possess a fair proportion of sting. Although no names are given, it is not a difficult matter to locate the district where the lecture was given. I also attended the same lecture, and, whether or no the errors complained of were made, I think that it cannot but be admitted that the lecture was not altogether devoid of interest, and that the lecturer did his best with the limited time at his disposal. I am only sorry that, supposing such errors to have been made, that the lecurer's attention was not called to them at the time, as every facility was given for doing so. If I remember aright, the Chairman at the end of the meeting made the announcement that the lecturer was willing to answer any questions, but no one took advantage of the offer. I think it would have been better to have had the matter cleared up then, instead of bringing it so prominently before the public. By ventilating the subject so freely it seems to me that it must to a certain extent have a tendency to hold up to ridicule a man who (whatever his faults as a lecturer), by holding a certificate as a second-class expert, shows that at any rate he must have a good practical knowledge of bee-keeping, or the same would not have been granted to him. I also think that when such charges are made, it would look more like a British bee if the writers appended their names, instead of hiding behind a convenient *nom de plume*. I notice that in the BRITISH BEE JOURNAL for December 28 (1686, p. 516), "Another who was there" has a word to say about "the arrangements, or, rather, want of them ; and the difficulty in obtaining a Chairman." I raise an objection to that paragraph. I admit that the Chairman did not turn up, but fail to see that it was from want of arrangement. I can only say that I personally saw the gentleman who was to have taken the chair, and also sent him handbills of the meeting, and supposing that "Another who was there" had managed the affair, I do not see that more could have been done. I was quite as disappointed as himself at the absence of the Chairman. I have since received a letter of apology from the gentleman referred to, giving me the reason for his non-attendance.—G. T. PALLETT, *Maheney, Nr. Derby.*

IMPROVING THE "W.B.C." END.

[1702.] I have been reading the discussion on the above heading with much interest, and, like friend "H. C. J." and others, I think it would be a great improvement if the "W.B.C." end had some sort of distance-keeper from the inner sides of hives. I have tried them and several other sorts, but cannot get any to suit better than wide-shouldered frames such as Mr. Woodley describes. I find that if you have to alter the spacing of the frames to prevent too many drones in the hive, it is a lot of trouble, especially if you have a large apiary, or not always at home, as I am. The way I get over that difficulty is this : when I go through my hives to clean them out every spring, I always sort out the combs that have a lot of drone cells in them, and substitute those that have very few in ; or if there are two or three combs in the hive, with, say, the bottom half of the frame drone comb, I cut it right across and take it out, then replace, and when the bees begin to build again they most always build worker combs, as honey is not coming in very fast then. If one takes care at the proper time, and sees he has very little drone comb in brood-nest, he won't be troubled much with them or the necessity to move his ends.

I am sure the bee-keepers of this country are much indebted to you for keeping such a

Journal going, as I look forward for it every Friday, and devour its contents in one evening with such interest that I am blowed if I don't dream about bees the rest of the night.—Wishing you the compliments of the season, JOHN LYON.

[Referring to what our correspondent terms the "lot of trouble" to alter spacing of frames to prevent drone production, it should be remembered that the frames are spaced at the narrower distance when the swarm is hived, and once the frames are filled with worker comb the "ends" are simply pushed home, and no more trouble occurs. We should think this rather saving trouble compared with the plan of sorting the combs as detailed above. Many bee-keepers, however, never fix frames at the narrower distance, preferring to use full sheets of foundation.—EDS.]

BROOD-HATCHING ON NEW YEAR'S DAY.

[1703.] Having made a "Wells" hive, I moved two stocks of bees into it this morning, and found, to my surprise, that one of them had brood in at least two combs; there were a good many young bees, and I saw one emerging from its cell.

I think this may be interesting to your readers.

The stock in question was worked in an ordinary double hive last season, and was very strong; it is now on eight combs, which are crowded with bees. They are Ligurians, and the queen is two years old.—HAGGIS, *Croydon, January* 1, 1894.

ENGLISH *V.* FOREIGN HONEY.

[1704.] Like other bee-keepers, I am much interested in this subject, which is just now to the front, and admire the efforts recently made, when a deputation waited upon the Lord Mayor, the object of which was to place English honey on a better footing in the market, and to keep the foreigner out; and, judging by the correspondence which appears in your columns, it occupies the thoughts of most bee-keepers. But it seems the path to success is not to be a smooth one, for now we are confronted by an advertisement in which 4,800 lb. of foreign honey, in quality the finest ever seen, is offered at about half the price of English honey. Now this appears to be quite in opposition to the interests of all British bee-keepers, as well as to the British Bee-keepers' Association and others who are just now trying so hard to keep foreign honey out of the market.

Perhaps, Messrs. Editors, you may think this is "writ sarkastick," as you told J. Dean last week; but I believe I am only echoing the thoughts of hundreds of cottagers, who, like myself, have to think of the profit as well as the pleasure of bee-keeping.—G. T., *Wilts.*

WEATHER REPORT.

WESTBOURNE, Sussex, Dec., 1893.

Rainfall, 2·90in.	Sunshine, 64·55 hours
Heaviest fall, ·55 in. on 12th	Brightest day, 25th, 6·50
Rain fell on 18 days	Sunless days, 8
Above average, ·46 in.	Above average, 3·85
Maximum Temperature, 53° on 13th	Mean Maximum, 43·4°
Minimum Temperature, 19° on 3rd	Mean Minimum, 31·3°
Minimum on Grass, 15 on 3rd	Mean Temperature, 37·6°
Frosty Nights, 14	Maximum Barometer, 30·80° on 29th
	Minimum Barometer, 28·26° on 20th

L. B. BIRKETT.

WEATHER REPORT FOR THE YEAR 1893.

WESTBOURNE, Sussex, 1893.

Rainfall, 27·75 in.	Sunshine, 2069·9 hours
Heaviest fall, 2·28, in. on October 17	Brightest day, June 17, 15·35 hours
Rain fell on 158 days	Sunless Days, 54
Below average, ·31 in.	Above average, 223·5
Maximum Temperature, 86°, on June 18	Mean Temperature, 48·7°
Minimum Temperature, 16°, on January 5	Maximum Barometer, 30°, on December 29
Minimum on Grass, 9°, on January 3	Minimum Barometer, 28·26, on December 20
Frosty Nights, 71	

L. B. BIRKETT.

Queries and Replies.

[1705.] *Bee-Farming as an Occupation.*—1. Are there, in this country, any extensive bee-farms uncombined with other forms of farming? 2. Can a bee-farmer be certain of finding a market for his honey at a remunerative price; and, if so, what price can he depend on getting for extracted honey? 3. In the case of a well managed apiary in a good locality, what should be the average yield of extracted honey per hive per annum? 4. In the case of a person not tied to any locality, what place or district in the South of England would you recommend as being the most advantageous in which to start an apiary? 5. What should be the net average profit, per annum, from 100 hives in a favourable locality? 6. How many bees (or hives) can be kept per acre of honey forage? For instance, how many bees would one acre of clover keep in full work while the crop lasted. —F. B., *Brighton, January* 2.

REPLY.—1. There are no such farms that we know of, and it is more than probable that we should have heard of it had such bee-farms existed in this country. 2. As illustrative of how much depends upon individuals, we may mention as a fact that while some of our largest British honey-producers find a market for their crops, at a fair price, other bee-keepers, who only harvest a cwt. or less per season, have great difficulty in disposing of it. More than this we cannot say. 3. Taking our seasons all round, we should call 40 or 50 lb. per hive a good general average for the best districts; though in some seasons that amount

may be trebled. 4. The reports given in our pages from various districts form the most reliable data on which to make a selection of a county in the south. For preference we should name Essex or Kent. 5. Perhaps some of our correspondents who keep 100 or more stocks of bees will kindly reply to this query, seeing that no amount of knowledge, short of actual practical experience, will enable anyone to do more than hazard a guess, which must perforce be more or less an uncertain one at the best. 6. We should not care to set down more than sixty to eighty stocks on one spot, even in the best locality, and, as for the yield from an acre of clover, it depends upon the amount of bloom on it. We have seen fields of clover perfectly white with bloom, and capable of giving full work to four or five stocks of bees per acre when at its best, but it would be folly for us to figure out anything like accurate returns on such points, in view of the uncertainty of our season. In short, and to sum up our correspondent's queries, they are too definite for either ourselves or any one else to give reliable replies to. For instance, query No. 5 is much like asking what should be the net profit from a particular business if carried on in a certain street in a certain town —say, London? We know that under exactly similar primary conditions one man will make a fortune while another will end in bankruptcy. And so to fix even approximately the amount of profit obtainable from one hive, or from a hundred, in any one season or in any particular district, is misleading and unreliable. The only thing we can, and do say with confidence, is that honey production in this country, with its fickle climate, is too uncertain a source of income for any one to rely on it as a sole means of obtaining a livelihood. In a word—as we have said over and over again in these pages—however helpful it may be as an adjunct to one's income, and however delightful as a home hobby, the way to fortune here is *not* through a bee-hive.

[1706.] *Dysenteric Bees.*—I should like to have your opinion on the best thing to do when a hive of bees shows signs of dysentery commencing. One of my hives is in that condition, so I brought it into the conservatory and changed the frames and bees into another hive. The combs were quite clean, but the floorboard and one side of the hive were much soiled. On removing them, a few dozen bees fell to the bottom and died. Seeming not able to rise, I fed with warm syrup, and they became quite lively. They had not nearly finished the honey in the combs, which I was surprised at, as from their state I imagined the bees were short of food, and they were not even damp. These were bees I brought from France in the autumn, and were quite healthy. They have lost the parasites they had on them that I wrote about some time since. I shall keep them in the conservatory until this cold weather is gone. I should be glad to know if what I have done is right or wrong. There seem to be differences of opinion about feeding with syrup or candy—if required in winter—and, as I only commenced bee-keeping in the early spring, I am not in a position to judge for myself. I have six stocks for wintering, and don't want to lose one.—F. Fox, *Epsom*.

Reply.—So long as the combs are free from "soiling," the attack of dysentery can only be slight, and the measures taken are the best under the circumstances. As a rule, soft candy is much more suitable as a winter food for bees than syrup, but dysenteric bees require warm food and a dry hive above all things. If the bees are fairly strong in numbers and are kept warm till the frost goes there seems no reason to be alarmed for them.

[1707.] *Bees Flying in Frosty Weather.*—Can you kindly tell me the cause of my bees coming out when it is freezing? I bought a swarm on May 27 last—a very strong one, I was told. I put them in a frame-hive on nine frames of comb, but the bees did not do much about here last season, so I got 20 lb. of sugar and made it into syrup in August. They took all but a pint by the end of September. I covered them up for winter by first laying sticks across the frames, then a piece of calico over frames, and adding two layers of carpet on this, and waste-paper on top. To-day the bees are flying with the thermometer registering 5 degrees of frost. Some fly right away, others dropping down close by. I picked up sixty-four dead bees in one day when there had been 11 degrees of frost in the night. What is the lowest temperature at which the hive might be opened to put some candy on? I might say they have got some combs of sealed food, as I can see from the back.—Beginner, *Eagle Cliff, Greenhithe, December* 31. P.S.—I lost a stock last winter.

Reply.—It is not natural for bees to fly abroad under the conditions named, but why they do so it is not easy to say with certainty without a personal inspection of the hive. In the first place, the amount of top-covering to the frames seems quite inadequate to keep in the warmth so necessary to the quiet well-doing of the bees. The abnormal activity displayed in frosty weather may be the result of the extra consumption of food required to compensate for the loss of heat owing to the want of close-fitting warm top coverings above the frames. As a remedy we advise a partial examination of the combs on the first opportunity. No harm will result so long as the bees are flying, as stated, when the examination takes place. If sealed food is plentiful, and the bees are fairly numerous, remove the sticks, pack the carpet coverings close down to top of frames, and set thereon a board of ½ in. stuff, large enough to cover the frames and having a circular feed-hole in centre.

Weight this board down to make it fit close and prevent warping. If food is short, set a cake of soft candy above feed-hole and cover it with a shallow box, or box-lid, to keep in the bees; add over all some additional warm coverings, and see if the bees d n't remain at home "when it is freezing."

[1708.] *Curious Sample of Honey.*—I am sending by this post a sample of some honey I have left. Would you please tell me what you think of it? Is it good or otherwise? How is it that it has not granulated? I like it myself, but have not tried to sell it as it is so dark. I have about 30 lb. of it, and all my other honey has granulated, and I have sold 1,800 lb. altogether this season from twenty hives, at an average price of 8d. per lb.—H. R. R., *Monmouth, January* 5.

REPLY.—There is, we think, a good portion of honey-dew in sample sent, but, before pronouncing on it, we should be glad to have a line to say if it has been *heated* or dealt with in any way since removal from the hive. It is a very curious sample of honey in its present condition, unlike any we remember to have seen. The colour is that of heather, of which, however, there is no trace in the flavour, and, though perfectly clear and bright, it is so stiff in consistency that the jar may be turned upside down without the honey leaving it.

Echoes from the Hives.

Graaff Reinet, Cape Colony, S. Africa, December 11, 1893.—Our bee season is just beginning now. Owing to the severe drought, which broke up in the beginning of October, the bees are six weeks later than usual. My first swarm came out last Tuesday, and, after some difficulty, the bees settling and flying at once again, I managed to secure them. The reason they were so anxious to go was because, being next to the veldt, they are able to find plenty of holes, &c., to go into. Wishing you a happy Christmas and a prosperous new year.—S. RABONE.

Soham, Cambs, December 24, 1893.—My bees are going along well for the present; they have been out every fine, warm day this last week or so, and worked on the ivy-bloom in large numbers, which is close at hand. One lot, which I drove from a skep and placed on frames, I am afraid I must take indoors to save them if the weather comes sharp. I shall put them in the attic with my Wells Hive I have there, which has two holes cut through the brickwork for them to enter by. It has done well this year, but they have propolised all the holes up in dummy, which does not seem to make any difference; they agree just the same.—J. L., *S., Cambs.*

PULLED QUEENS.

DR. MILLER TELLS ALL ABOUT THEM.

One of the bee journals for which I have a real respect asks for a "rest" on pulled queens. Why? If it has tried them and found out that there is any harm in using them, would it not be a better way to tell the harm in the case? Certainly there has not been such a great deal said about them; but enough has been said against them to show that most if not all of those who say anything against them have never tried them, and don't know what they are talking about, merely giving speculative opinions. Those who have tried them will no doubt enjoy a quiet smile on being gravely informed in one of the bee journals that it is said that "pulled queens are very short-lived, and that but few of them ever become fertile on account of having their wings destroyed by *pulling* the queen from her cell before being properly matured." Elsewhere the suggestion is made that it would be better to use queen-cells, thus letting the queens come out at their own time; and one man goes so far as to say that, instead of pulling queens, he puts wax over the spot in the cell that has been gnawed by the queen so as to hold her prisoner in the cell a longer time, thus making her stronger.

I will try to be magnanimous enough not to oblige any one to use pulled queens who does not want to; but as I have found no little advantage and convenience in their use myself, I will try to clear up some misunderstandings that seem to prevail.

When a queen is raised at any time in a colony where there is no intention of swarming, I think it will be found that the queen emerges from her cell too young and tender to fly, and quite light coloured. I can hardly believe, however, that nature is making any mistake in the case, and I do not believe that she would be any the better queen for longer confinement in the cell. In other words, I think she will mature as well out of the cell as in it. At least, the bees seem to think so, and govern themselves accordingly.

If swarming is contemplated, a number of queen-cells being built, one queen is allowed to emerge, and the rest are held in their cells. One or several of them will be thus confined a day or more, the free queen piping and the others quahking. They are not confined in the cells because they are any better for it, but because the exigencies of the case require it.

Now, suppose we go to a hive containing these queens in cells. Take out a frame and find a queen-cell. Looking close, you may see a little slit gnawed by the queen, passing part way round the cell near the smaller end. Through that slit the workers feed her during her imprisonment; and, when allowed by them, she will enlarge the slit and push open the cap.

But you may not see any such slit. If you don't, I know of no way of telling whether

the queen is matured enough to emerge, or too immature to emerge for several days. Pull the cell and see. That doesn't mean that, by some means, you are to get hold of the queen's wings and pull on them till you get her out of the cell. It's the cell rather than the queen that is to be pulled. Take hold of the cell and pull it off. A bee-keeper of any experience will readily do that without injuring the queen, and so, probably, would one without experience. All that's necessary is simply to grasp the cell tight enough to pull it off, but not tight enough to mash it.

The probability is that in pulling it off you did it in such a way that it left the base of the cell entirely open. In that case the queen will back out in a little while, providing she is mature enough, although she may persist in gnawing open the cell in the regular way, and coming out head foremost. If she is old enough the cap has been already gnawed off, all but a little hinge, and she will promptly push her way through.

You may, however, find her at any stage of immaturity, down to the grub. If too immature for use, all you have to do is to throw away the cell and try another. At swarming time queen-cells are so plentiful as to be of little account. If, however, you think the cells sufficiently valuable, and don't wish to destroy any, don't take any except such as show the queen gnawing her way out, and leave the others to ripen. With the point of a penknife scrape over the place where the queen may be expected to gnaw through, and if the cell is ripe enough the knife-point will push its way through, and you will easily pull off the cap and allow her ladyship to emerge. If the cell is not ripe enough, there is little danger of the knife pushing its way through.

If the queen is strong enough to cling to the side of a comb and walk over it without falling off, she is probably mature enough to be good. But you can easily decide whether she is mature enough by putting her in the hive where you want her accepted. If she is not mature enough the bees will promptly seize he and cast her out; but if she is mature enough they will pay little attention to her.

If you have a case where it is difficult to introduce a queen, and have one that is barely mature enough to be received, and another that has been imprisoned in its cell two or three days by the bees, I think you will find the bees more likely to accept the younger one.

Now, where's the advantage of giving a pulled queen over giving queen-cells? I'll try to tell you some of the advantages. You are not dealing with a pig in a poke, but know what you are doing. If you give a cell, you are not sure what is in it, if, indeed, you're sure there's anything in it; for, sometimes after a queen emerges, the bees close up the cell so it has all the appearance of having a queen in it. I've seen many a cell with a dead queen in it, but looking all right. It takes less time to put in a queen than a cell. Bees will sometimes destroy a cell when a princess of the right age would not be molested. The cell may have in it a queen with defective wings, or it may be objectionable in other respects; but in giving a pulled queen you need not give any except one whose appearance suits you in all respects.

On the other hand, I don't know of a single advantage a queen-cell has over a pulled queen. Do you?—C. C. MILLER, in *Gleanings*.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

A. H. YOUNG.—The honey sent is from mixed flowers, the predominating flavour being heather. We could not fix its price, the value of honey varying so much in different localities. If offered for sale it should be described as from clover and heather, in order to account for its strong flavour.

F. M'C. (Carlisle), *Flour Candy*.—Candy sent is quite right, the "smell" noticeable being only that of the flour. We do not notice any sourness about it. Thanks for good wishes, which we cordially reciprocate.

Several Letters, Queries, &c., are in type, and will appear next week.

GLEANINGS
IN BEE-CULTURE.

A JOURNAL DEVOTED TO BEES, HONEY, & HOME INTERESTS.

Edited by A. I. ROOT,

MEDINA, OHIO, U.S.A.

The above popular Fortnightly American Bee Journal can be had from the Office of the *British Bee Journal* and *Bee-keepers' Record*, 17, King William Street, Strand, W.C. at 5s. per annum.

Posted same day as parcel reaches this country from America.

We cannot take Subscriptions for the above for a less term than ONE YEAR, and intending Subscribers should notify us, when ordering, if subscription is to cease on expiry of the year for which payment is made.

Editorial, Notices, &c.

TO OUR READERS.

There are good reasons for thinking that the plan we have this year adopted of stating clearly and fully in print the conditions on which we purpose conducting the various departments of our JOURNAL in the future has met with general approval. Not that any radical changes are involved in the arrangements printed on second page of BEE JOURNAL cover, for, as a matter of fact, most of the details there enumerated have been carried out in practice for a long time past. But somehow, where a large number of persons are being dealt with, it is perfectly astonishing how various are the idiosyncrasies and widely differing temperaments revealed. To print the letters received would certainly point a moral, even if they failed to adorn a tale. And if we insert the substance of a specimen or two, it will, we trust, have some effect in the way of enlisting some small amount of sympathy with ourselves in our "difficulties" when dealing with subscribers whose prevailing method has no savour of the *suaviter in modo*.

Referring especially to the subscription department—in which the main troubles occur—it should be explained that some years ago the experiment was tried of enforcing the rule of "payment in advance" by discontinuing the JOURNAL after notifying the expiry of subscription. This proceeding, however, gave such dire offence to the great bulk of our subscribers, and, moreover, lost us so many friends, that the experiment is not likely to be repeated. And so—while still giving notice when subscription expires—we continue sending the JOURNAL, and rely upon the honesty of those who accept delivery of it for payment.

We have followed this plan, believing that anyone who desired to stop taking the paper would naturally adopt the simple expedient of refusing delivery by the postman, in which case it is returned to us marked "refused," and the subscriber's name is promptly eliminated from our list, no further copies being sent. In view of these simple facts, what can be thought of one—whose letter is before us—who writes:—"In reply to yours, allow me to inform you that I hold your printed notice, received December 24, 1890, in which you inform me that my subscription to the BEE-KEEPERS' JOURNAL had ended. The terms stated on this notice was 6s. 6d. for twelve months, *payable in advance*. I always paid in advance, and have never *ordered* your paper without sending the money in advance, and as I have never ordered a paper since that date I have nothing to propose."

Now, the point of the above lies in the fact that the writer of the letter quoted had been coolly accepting delivery of the paper for about two years after his original subscription had expired! Another subscriber was exceedingly irate on application being made for a long overdue subscription, and after having had over two years' papers delivered to him post free, wrote to say that he had paid one year's subscription "in advance, as required," and thought the subsequent copies *had been sent gratis*, concluding his epistle by declaring that he "had paid what he considered to be due, and would pay no more."

Luckily for the "Treasury" of this journal—and, let us hasten to add, for the credit of the British bee-keeper—these objectionable experiences are not numerous; for they are very trying to one's belief in some folks' sense of justice and fair dealing. Besides, they are more than counterbalanced by the far more numerous receipt of such acknowledgments as the following, just received, in which the writer says:—

"At last I have the pleasure to send you my subscription for the whole of last year, 1893, and for the next six months of 1894. I thank you very much for your kindness in sending it as you have done, and I hope to be able to pay in advance in future. I like the journal very much, and so far as my bee-keeping goes, cannot get on without it."

There is just one other point worth noting, and that is the question of *postage* in connection with receipts for subscriptions and small sums sent us by post. Some of our friends expect prompt acknowledgment by post of all cash sent, however small the sum; to quote an extreme case, the other day we received three penny stamps, and the sender (seriously, we suppose) requested an acknowledgment of receipt by post.

Now we want it to be understood that all subscriptions are acknowledged by printed receipt sent along with the current copy of the paper, if received in time, but in any case in the following issue. And we are quite sure that if subscribers could realise how large an annual sum it would cost to send receipts otherwise they would admit the reasonableness of our plan.

In conclusion, let us say these lines are written mainly for the purpose of drawing attention to the particulars printed on second page of cover, to which reference has been made, and if readers will carefully peruse (once only) the directions there given, it will save any chance of injustice being done to themselves or to ourselves in the way to which attention has been invited.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of December, 1893, was £1,862.—*From a return furnished by the Statistical Office, H.M. Customs.*

IRISH BEE-KEEPERS' ASSOCIATION.

A great advance was made in the promotion of bee-keeping during 1893 by this Asso-tion, in that very important aid was obtained from two Government Departments.

Early in the year the Committee represented to the Congested Districts Board the desirability of promoting bee-keeping in their districts, and, to support their suggestion, made inquiries themselves in a portion of these districts, and sent the Board a report. They made also an application to the Commissioners of National Education for the introduction of bee-culture as a branch of national education. The following are the results in each case:—

1. Mr. Turlough O'Bryen, on the recommendation of the Committee, was appointed by the Congested Districts Board, Instructor in Bee-keeping, and by order of the Board visited a portion of their districts, gave instruction, and supplied (on an undertaking being given to repay the cost within a specified period) hives, bees, and appliances to suitable persons, who it is believed, as a rule, are willing and will soon be able to assist and instruct others. These operations the Committee have reason to hope will be not only continued, but far more widely extended in future.

2. The Commissioners of National Education ordered that bee-culture be recognised as a cottage industry, with a fee of 5s. payable per pupil of fifth or sixth class, for efficient practical instruction in National Schools:—

(*a*) With school farms attached,
(*b*) With school gardens attached,
(*c*) With recognised dairies attached.

The usual conditions as to attendances, &c., are to be fulfilled.

The Committee met on the 9th inst., Rev. Canon Sadler in the chair, and, at the desire of the Congested Districts Board, decided upon a scheme to be laid before the Board for more extended operations during the present year. They also appointed a Sub-committee to consider the question of revising the specification of a standard hive for Ireland made some years ago.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see* 1*st page of Advertisements*).

*** *In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1709.] We have had a very great change in the weather last week. The mercury was shrunk by the intense cold until it nearly found room to stow itself away in the bulb part of the thermometer. Then came a grand change, and the expansive action of the heat wave increased its volume until it crept up the tube till the scale indicated something above 50 degs., and with the increased temperature the bees came out in strong force; in fact, some who do not know much of their habits asked if they were going to swarm! The flight came in good time, as during the autumn, in fact, up till Christmas Day, when they were on wing, they have had many, nearly daily, opportunities of flight, so that the fortnight of confinement to their hives must have come somewhat unexpected to them, and this break in the cold weather has enabled them to make provision for a recurrence of such weather.

I notice friend Webster in last number of *B. J.* is not very much in love with metal-covered roofs—some are too heavy, and others are sharp-edged. Now, in regard to the last, sharp-edged kind of covers, yclept zinc, I can assure Mr. W. that if the zinc is

secured to the wood roof in the manner I have secured those of my hives that required such rainproof covering, there will be no complaint on the score of torn flesh or lacerated hands; and the weight of a sheet of zinc, 32 in. by 30 in., which is large enough to cover the roof of a combination hive, and turn up under the eaves at the sides and under the projections of gables back and front of hive, and nail under all round with small flat-headed clout nails, I say the additional weight will be a little over 3 lb., and the hive is rendered rainproof, while the under-eaves nailing allows the whole of the covered roof space for any expansion of the zinc under the rays of the sun.

May I ask if any of our observant bee-keepers have noticed any difference in the strength of colonies in the spring attendant on their early or late preparation for winter in the previous autumn? From observations I have made myself, I am fully persuaded that it makes a considerable difference to the strength of the colony the following year if the packing up for winter is done late in August or early in September than if it is neglected till late in September or October. In the former case, the preparation, and probably feeding up to the required quantity of food, starts breeding at a time when the young bees may get several flights, and thus become a source of strength to the colony during the winter months, and prove vigorous workers in the early spring. Then another advantage early preparation gives to a colony is the proper distribution of the stores. If, as I said before, brood is being raised, the bees will distribute the incoming stores for the winter sustenance of the colony in the best possible position to be reachable when required, whether it is for present consumption in brood-rearing or as food for the adult bees later on in the year. Then, after the brood hatched out, the empty cells will be available for the compact clustering of the bees during the winter, and they will thus escape another possible accident of a thinly-spread colony, and that is the probable loss by a sharp nip of the bees that may be located on the outside of a comb. I have had such mishaps more than once when we have had a sudden change to a very low temperature. Yet another important item connected with early preparation of colonies for winter is the opportunity it gives the bees of propolising every hole in the quilt or draught-hole from badly-fitting coverings on the tops of frames. The bee-keeping industry will have to wake up to a full sense of the danger it has to encounter with the adulterator in our very midst. I notice that the Vintners held a conference in Paris on the 10th inst. for the purpose of protecting natural wine against the artificial wine which is reported to be flooding the French market, and our American bee brethren are using every endeavour to promote the passing of the Pure Foods Bill, to which they are looking forward as a preventative to honey adulteration. What are we doing to prevent or punish the honey adulterator? We have Acts at present on the Statute Book that will reach and punish such criminals if brought to justice. What we want is an association of bee-keepers to protect the honey industry, each subscribing, say, 5s. per annum, to form a fund by which not only adulterators of honey, but also the vendors of such vile stuff, may be prosecuted. A few convictions would do more to stop the nefarious practice than volumes written against the practice. Who will help in the matter, who will subscribe to a Bee-Keepers' Defence Fund? If only two in each of the 100 counties in Britain, we shall be able to make a start; but if ten in each county will plank down the subscription (only a small one of 5s.) we shall have a respectable start, and be in a position to employ men of ability to prosecute in the Law Courts.

I beg to thank Mr. Wells for his method of wax-extracting last month. I thought probably he had some special method as his wax returns are very large compared to the size of his apiary, and I felt I am not careful enough to extract all the wax from the combs, as my quantity of wax yearly bears no comparison to Mr. Wells's when the sizes of our apiaries are considered.—W. Woodley, *Beedon, Newbury.*

LECTURERS AND TEACHERS.

[1710.] Humanum est errare. Perhaps it may not be the happiest moment of Mr. W. B. Webster's life to pose as a teacher. He may be a lecturer, I will not question that. He is not sufficiently careful in what he says, I am sure of that. Mr. Cribb (1699, p. 15) gives mathematical demonstration on the subject of gauze *versus* perforated zinc, through which Mr. Webster now admits that bees will pass. It is therefore unnecessary to caution amateurs against its use.

Seeing that it is an easy matter to catch the queens, what objection is there to putting three or four stocks of driven bees together, and on arrival home to separate them into hives as required, and requeen them? I have done this repeatedly, and I am not aware of any difficulty experienced. Two large hives will hold eight stocks in August and September.

To return to Mr. Webster's letter (1695, p. 13) *pace tua.* There are animals having an extended horizontal vision of great power, but the vertical view suffers in consequence. Mr. Webster's eyes must have a similar tendency. Is there not a deficiency in some respect? Is there not a want of tact in saying I recommend bribery with a view of getting a person to do an honourable action? Has the figurative expression been too high for his vision? If he is a married man, may I ask him if his wife never bribed him to purchase her a new dress? Mine is trying the game on

now, but I think I can hold out till Whitsuntide—*parturiunt montes nascitur ridiculus mus*—(for Mr. Webster's eye only). I can assure him that the method I recommended is listened to favourably by more than one County Councillor. I see Mr. Woodley also falls in with my views, which will be all the better for a little difference in opinion.

Again, I am charged with failing to see the "other" class of the community which Mr. Webster designates a "host" "fairly educated." This is entirely a misapprehension on his part. I was writing about educated and uneducated bee-keepers. I presume there are uneducated bee-keepers who have become very proficient in technical callings. If Mr. Webster, as an expert lecturer, expects to teach other than bee subjects, he will soon be undeceived. I remind him of this *in terrorem*.

Now my pen is in *furor scribendi*, I feel I must say a few words about the W.B.C. metal ends. They are perfect with perfect hives. They are a splendid invention, and their sale testifies their usefulness. All the same, I have bought three gross from Mr. Meadows—vide editorial note—but I did not think it necessary to tell him that every one has had a spur cut on them. So that it will readily be seen that Mr. Meadows' testimony is not what it appears on the face of it. I would rather buy them ready cut, and I hope they will soon be offered on sale cut ready. With several different kinds of hives in use, they are interchangeable with it, and the proper distances are kept. The pith of the whole argument lies here—one person says they are useless. He does not want them. Another says they are precious—he needs them. When a man makes a hive whose whole list of tools comprise a saw, a rule, a smoothing plane, a pocket knife, a hammer, and a dull chisel, I can assure the reader that a spur is as precious as ointment. They are a most valuable acquisition. It is sheer nonsense to say the bees fasten them.

How about the weather, Messrs. Editors. I agree with you it's no use being sure unless you know. Bees are flying by thousands, January 11, 12, and to-day (13).

I have just been thinking how nicely I have responded to the siren's song and trodden ground feared by angels. I crave your pardon and forbearance, and add, in conclusion, "Vir sapit qui pauca loquitur."—NOT A HEATHEN.

FOREIGN COMPETITION.

[1711.] Bee-keepers, I feel, will at once hurry up with their expressions of thanks for the very forcible manner in which you place this matter before them. Those who were not wide awake to the fact will have received a severe "sting," especially when they turn their dilated orbs on a certain advertisement in "our" JOURNAL and notice that the "40 cases are now nearly all sold," and at 4½d. per lb.! What a "sandwich" for us to digest. How to digest it?—let that be the question of the day. The foreigner has already got a hold on our market, and can clearly undersell us; 1894 must decide the question "What is to be done?" Now is the time for our Associations to take the matter up. Most of them will be holding their meetings soon, when foreign competition should be their main item for discussion. What can we bee-keepers do individually? Nothing; but the "Heathen," despite the spasmodic oscillations of his head-feathers, solves the problem. "Steps must be taken in a body," under the guidance of those famous men of our B.B.K.A., and I feel Shropshire as a county will not be the last, if least, to take her share in the battle.

Another eye-opener you have placed before us, Messrs. Editors, to begin 1894 with. I refer to that "letter" quoted on page 1 of our new volume. What a lovely piece of simplicity. Does it exist? Your assurance is indisputable, yet we turn from it with disgust. In this advanced age of bee-keeping I am at a loss to understand how a producer of a quantity of honey, as this person must be, could be ignorant of the facts which you so charitably give him. Let us hope he will sincerely take your excellent advice to heart, and disabuse his mind of the fallacy that bees convert sugar-syrup into honey. In my last I referred to the mildness of the season and the probability of the "nip" coming. It has come!—been with us several days. And what a "nip!"—17 degrees of frost, with an east wind that seems to penetrate the very marrow in our bones. How long it will last who can tell? What a comfort to lie in bed (after a "nip" of w——y and a teaspoonful of honey hot) and to feel quite certain our little buzzers are prepared for the longest siege. It is a good "dodge" to sweep the snow from the top of hives and the ground in front. The first thaw will clear this ground long before the bulk of snow is gone, and on the bees taking their first flight many will be saved. Lots of the old bees will now be weeded out and drop from the combs. Care should be taken that the entrance is not blocked with dead, but kept clear with a bent wire. I cannot say that I like the alteration in the JOURNAL; perhaps I got a little prejudiced on calling for it at my bookseller's. He could not at first find them in his newly-arrived parcel, as he was looking for the old familiar frontispiece. In any case, it will always find first place on the table of—SALOPIAN, *January* 8.

FOREIGN COMPETITION.

[1712.] It is not at all surprising that correspondents should grumble about the foreign competition introduced by a firm of appliance makers, and though the price quoted probably represents the true value of the honey offered, it cannot fail to be injurious to the home in-

dustry, and further tend to lower the price of English honey. The same firm also offered an absurdly low price for wax not many weeks ago.—E. H., *Worcestershire, January* 12, 1894.

[Our correspondent is, we think, rather too severe on the firm referred to. If it is considered what price wax brings when cleansed and manufactured into comb foundation, we cannot call 1s. 3d. per lb. for bees-wax (as it comes from the bee-keeper) an "absurdly low price." We have referred elsewhere to the matter of advertising foreign honey as it affects our home bee-keepers.—EDS.]

BEES NEAR COLLIERIES.

[1713.]—The enclosed is a sample of my extracted honey gathered in '93. We have no shows of honey or expert judges in this part of the country, so will you kindly through B. B. J. express your opinion as to its quality? I may state that my hives stand within 100 yards of one of the largest coal mines in this county, and my bees do very well indeed. I have had 104 lb. from one hive—that was in '87. This year I had over 70 lb. from the best. With best wishes, T. T. M., *Sunderland, January* 12.

[Except for being just a little thin, or lacking in consistency, the honey sent is of excellent quality; good in colour, aroma, and flavour. It is mainly from white clover, and there is certainly no trace of the "coal mine" about it, the colour being beautifully clear and bright.—EDS.]

MISCELLANEOUS.

[1714.] *Alteration in Vol. XXII.*—To be candid, I must confess that I do not think the new plan of printing the list of "Contents" inside the first page is so good as when printed outside. I also suggest an alteration, although I do so with fear and trembling. When preparing my JOURNALS for the bookbinder by removing the trade advertisement pages, I have more often than not had to cut a double sheet in half, and this, of course, causes the single sheets to become loose after the volume has been bound. Take this week's issue for instance. When one has removed the advertisement pages, the leaf containing pages 19 and 20 will, of course, become a single one. If the Editors could see their way to remedy this evil, I, for one, would consider it a great improvement, and doubtless many other readers of the ever-welcome BRITISH BEE JOURNAL would also.

The Weather.—I quite agree with the schoolboy who wrote in an essay, "In England we have no climate, and the weather is all samples." Here, on the 4th inst., the maximum shade temperature was 18 deg. Fahr., and the minimum 9 deg. Fahr. Just a week later the thermometer registered a shade maximum of 53 deg. and a minimum of 43 deg. A wonderful difference in seven days.

Moving Stocks to New Sites.—As I wished to move one of my hives to another part of the garden I thought I could not do better than do so whilst the bees were confined in their home during the late frost. This I did hoping all would be well. Last Thursday, owing to the high temperature, the bees issued from their hives in hundreds, in fact, their hum had quite a midsummer sound. Now, sad to relate, a great number of the bees from the hive recently moved flew to the site of their old quarters and failed to return, but paid a visit to another hive not far off, with the result that the ground was soon with corpses strewn.

Improving the W. B. C. End.—I was glad to see your Editorial on the above. I fail to see the need of a spur. If the hives be made correctly I find the W. B. C. ends are all that could be desired. I have them on most of my frames.

Letters by "Lordswood."—I feel that I must endorse what Mr. W. B. Webster says (1695, p. 13) anent letters by "Lordswood" not appearing in BEE JOURNAL often enough. I always read with great pleasure his charmingly descriptive letters, living as I do not far from the places he so graphically describes.

Vicious Bees, &c.—Mr. E. J. Gibbins undoubtedly hits the right nail on the head (1691, p. 6) when he says "the great majority of small and inexperienced bee-keepers . . . . . never willingly overhaul a *savage* stock unless it is absolutely needful, and the result is that because left alone they do better than a mild stock." When commencing bee-keeping I asked an experienced apiarist to advise me what to do to become successful. His reply was, "I will tell you what *not* to do, and that is, open your hives and disturb your bees more than is absolutely necessary."

Foreign Honey.—In the BRITISH BEE JOURNAL for January 4, it states that a certain advertisement will be withdrawn next week; the same statement is repeated in this week's JOURNAL; perhaps it is a case of "next week never comes." I am surprised that you, Messrs. Editors, ever allowed the advertisement to find place in *our* Journal, for I thought the BRITISH BEE JOURNAL was for the interest of *British* bee-keepers not *Foreign*, but perhaps I am selfish in my ideas.

Early Swarming.—If we can get our bees ready for swarming in March and April by adopting Mr. S. Simmins' method, we shall certainly have no cause to fear spring dwindling. Should we not require increase of stock? we have the advantage of a well-populated hive ready to take advantage of the honey-flow. I see a letter from "F. B.," Brighton (1705, p. 17). Being a Brightonian myself, I shall be pleased to correspond with "F. B." on bee matters should he be agreeable.—PERCY LEIGH, *Beemount, Stoke Prior, Bromsgrove, January* 13.

[Referring to the loose sheets, the fault is more imaginary than real. Bookbinders find

no difficulty when binding the volume, loose sheets included. Besides, as a matter of folding and paging, we are sorry to say it cannot be altered without enlarging the size of journal.

Re the advertisement question. If our correspondent will "think the matter out" a little closer, we trust he will agree with us in considering it to be advantageous to the British bee-keeper that he be made fully acquainted with what he has to contend with in the way of foreign competition. Besides, there would have been no justification whatever for our boycotting an advertisement of the kind referred to, seeing that it appeared above the name of a firm well known to all our readers.—EDS.]

BEE-KEEPING IN TOWNS.

[1715.] It may interest bee-keepers living in towns to know my last year's take of honey from three bar-frame hives—bees, Carniolan hybrids, from a Carniolan queen, received from Frank Benton, in 1888. Honey in good sections, 48 lb., extracted honey in frames, 84 lb., total, 132 lb. No swarms, bees packed for winter on ten frames, with about 25lb. sealed honey in each hive. No winter feeding required, and brood-nest not disturbed. My hives hold fourteen frames, parallel to entrance. I use Nettlefold's iron screw eyes, pattern, suit B, No. 2, for giving the distance between frames, and find them answer admirably, as a few turns of the screw backward will give the necessary distance for wintering. I also use narrow strips of American cloth on the ends of frames before placing the super on, and find by using a little vaseline the crates are easily removed.—JOHN F. R. AYLEN, *Plymouth, January* 10, 1894.

BEES AND HONEY IN EAST AFRICA.

[1716.] Enclosed I send you an extract from a letter from a friend in Kibwezi, East Africa, 200 milss from the coast, on the road from Mombasa to Uganda.—M. F., *Paisley*, January 4:—

BEES AND HONEY.

"Now for a little about bees and honey. I know I will have your ear and eye here, and I can assure you that I am going to be a bee-keeper.

"Last Friday, in answer to my request and the promise of a liberal present, the oldest elder in the district brought me two bee-skeps of the regular native pattern. These skeps or hives consist of a piece of a tree (trunk or branch), say 2 ft. to 3 ft. long and 7 in. to 10 in. in diameter, hollowed out by means of fire and hatchet. Sometimes you have a skep made from the tree at a place where two branches join a larger branch or trunk. When the skep is now hollowed out, the ends are closed very neatly by pieces of wood with one end arranged so as to form a key and grip, and a slight space is left between the end-piece and the skep, perhaps at two points to allow of the bees getting in and out.

"The skep being quite ready, a stick is cut of a peculiar shape like this :—

This stick is carefully singed in fire to preserve it for a longer time. Then creepers are tightly wrapped round the skep and fastened up to the lower end of the stick so as to suspend nicely the skep from the tree, the crook at the top of the stick serving as the means of hooking the skep on to the branch of the tree selected.

"Well, then my old friend came with his two bee skeps, and as I meant to get all the information I could from him, I treated him very kindly with a cup of tea, a chair to sit on, and a pleasant chat. We then adjourned to our garden and proceeded to hang up the 'skeps.' All being ready to hoist up, and a young fellow having climbed the tree carrying one end of the rope with which to hang up the skeps, my old friend produced a round block of some sweet-smelling substance—a mixture of wood-dust, resin, and I don't know what—and then began vigorously to rub the inside of the skep and the inner side of the end pieces. As he rubbed, he muttered in a happy, sing-song manner, 'Bees, bees, come, come quickly, come plenty, and make plenty honey, so that I may get many things from the white man.' The old rascal looked like some old wizard as he rubbed and muttered, and after a few minutes of this performance he handed me the end piece to smell—and it did smell very sweet and enticing—and then he assured me that as soon as the rains came I should have plenty of bees and plenty of honey.

"I am now the proprietor of three bee-skeps, and in one of them the bees are hard at work. We make jam out of honey and tomatoes, and the mixture, two days after boiling, begins to ferment, and then it is just delicious. Have you ever tried it?"

Queries and Replies.

[929.] *Suspected Dysentery.*—1. Last year I was in bee-partnership with a friend, and our bees were located about 100 yards from my house. This year we agreed to divide our stock, and I have removed four hives that distance. The hives were well wrapped up, with candy-cakes on each, and to-day, being warm, the bees were out well, removing their dead, &c., but I notice the alighting boards, hive roofs, and even the leaves of plants growing near covered with yellow spots, containing what looks something like minute grubs. Is this a sign of dysentery? and do you advise my giving warm syrup? I am rather afraid to

give them warm food, for fear of more cold weather. Nor have I overhauled them. 2. Two other hives that I had at home before, and have attended to entirely myself, do not show a spot anywhere — nothing beyond particles of dry candy, which they carry out instead of eating. How is that? 3. Will it be wise to have a good look inside the four hives first mentioned? They cannot be wet inside, as they are well covered with carpet and sacking, and zinc roofs over all. I am afraid it points to spring dwindling later on, which I am anxious to prevent if possible.—J. DEAN, *Strood, January* 11.

REPLY.—1. The removal has, no doubt, caused some excitement among the bees, and consequent necessity for a cleansing flight, which caused the specking noticed. There seems no need for alarm, or for suspecting dysentery as the cause of this, and seeing that feeding with warm syrup would only further rouse the bees to abnormal activity, we should not advise it. 2. The candy carried out is merely the particles which, owing to granulation, the bees cannot consume. 3. Do not upset the bees by examining, or having "a good look inside." It would only aggravate the mischief complained of, and so long as food is known to be plentiful, is not needed under the circumstances. At least, not at present.

[930.] *Adopting the "Wells" Hive.*—My outdoor factotum, a young man of nineteen, who is rather expert at carpentry, has just put together a very nice beehive, copying the hive known as the "Economic." His only experience of bees has been in helping me with mine last summer, when my four hives made £5, besides using and giving freely of honey, and this appears to him a royal road to wealth. He already aspires to a "Wells" hive, and, as the BRITISH BEE JOURNAL appears to think this kind of hive likely to be most used in the near future, I would willingly give him "the makings" of one if I knew how to instruct him as to the measurements, and in what respects the "Wells" differs from other hives. 1. I have one of Abbott's "Combination" hives. Is this convertible into a "Wells," and how? I am not clear where the two entrances should be – at the side, or one at each end, or the two side by side at end or front—*i.e.*, making one side the front. The latter seems to me the most reasonable. We have never any opportunity of seeing any show or speaking with an expert. Some bees are certainly kept about here in frame hives, but very unscientifically, and I cannot get at them. 2. I use only the divisible crates of sections. Are these the best to advise my neophyte to commence with? If he ever advances to extracting, &c., it will be by slow steps, I am sure, as he will want to use all the money he can get to help in the bringing-up of a swarm of brothers and sisters, and cannot afford to *buy* things. If I am troubling you too much, take no notice of it; but if, or when, time affords for you to give your kind advice for his benefit, I shall be very glad to have it for him.—GRANNIE, *Cashel, co. Tipperary, December* 22, 1893.

REPLY.—1. We should strongly deprecate the idea of our correspondent's protégé adopting the "Wells" hive without first making himself thoroughly acquainted with the Wells system, which is a far more important factor in making a success than the hive itself. He should read what has appeared from Mr. Wells himself on the subject in our pages, and would therein find that the hives used by that gentleman in carrying out his system are ordinary hives, holding fourteen frames in each, so there would not be much difficulty in adapting a "Combination hive" to it. Our correspondent, however, is mistaken when writing that "the BRITISH BEE JOURNAL appears to think that this kind of hive is likely to be the most used in the near future." We have never gone this length, but have simply given credit to Mr. Wells for the remarkable success he has achieved by his plan of working, and by making known to readers what has been accomplished by the double-queen system have given them a chance to do likewise. Besides, we have invariably advised our readers to try the plan on a small scale before adopting it to the exclusion of old and well-tried methods. 2. A simple form of section rack, holding twenty-one 1 lb. sections, would be easier to make, and altogether more useful than those holding only seven sections in each. In working for extracted honey we do not see how a full measure of success could be achieved without some form of extractor being used.

[931.] *Making a "Wells" Hive. Excluding queens from sections.*—1. I am the veriest novice in bee-keeping except in theory. I have three stocks of bees in ordinary bar-frame hives, and for a year or two have been reading up and thinking over the different processes in dealing with them. Four or five months ago I began to take in your most interesting and valuable paper, and I have to-day started to make a "Wells" hive. I did not see the number of the Journal in which it is described, but I have got a catalogue in which the hive is illustrated. I am thinking of using ⅜ in. three-ply fretwood for the perforated dummy, and boring it with an eighth of an inch bit. In the illustration I have, the thin sheet of wood seems to be set in a frame which takes up as much room as an ordinary frame. I fancy that there would be less propolisation of the dummy if the sheet of wood were made to run in a groove or between fillets on the side of the hive, thus bringing the frames on each side of the dummy to the regulation distance from it. What do you think? 2. Then as to the sheet of queen excluder zinc between the brood-nests and the sections, would the thin fretwood with holes of the proper size cut in it do instead? I do not like so much metal in

the hive. I do not use zinc in my other hives. In filling the section cases I bring the wood separators down low enough to divide the lower opening between each pair of sections into two, so that only the workers get up through. Of course that plan won't work with the "Wells."

I hope I am not exposing my ignorance in what I am saying. If so, please "wink hard" at the foolish bit and help a poor NOVICE.—*Lochgilphead, N.B., January* 10.

REPLY.—1. The difficulty in making what is called a "Wells" hive from a manufacturer's catalogue lies in the fact that in no two of these is the hive made exactly alike; nor do we quite know which maker most nearly follows out Mr. Wells's own ideas. We do know, however, that the perforated dummy should not be "a thin sheet of wood set in a frame," as described. Mr. Wells makes his dummy of best yellow pine an eighth of an inch thick, and it is not framed at all except by binding with tin. Before proceeding farther you should read Mr. Wells's letter in the BEE JOURNAL for November 10, 1892, and, if possible, some other of his communications in our pages on subsequent dates. The dummy, to be effective, must be capable of lateral movement, also of easy withdrawal, which would be impossible if it "slides in a groove" or between fillets as you suggest. 2. The thin fretwood with queen-excluding perforations would not answer; besides, there is no valid reason for not using the ordinary queen-excluder, zinc. Nor is it good practice to so arrange the wood separators as to exclude the queen from sections, seeing that of all the methods tried for securing this desideratum, none have been found so generally effective and reliable as the perforated zinc excluder.

[932.] *Excitement among Bees.*—Every day for the last week or so my bees have been in a most excited state during the middle of the day, hundreds of them bagging round in front of the hive, and almost covering the entrance hole and alighting-board. 1. Do you think there is anything the matter with them, or is it likely the queen has died? 2. If the hive turns out to be queenless, whatever should I do, as I have no other stock to unite with it? 3. What are zig-zag entrances for, are they desirable? 4. Should bee candy be just like a round ball of white sugar and break to pieces if you touch it at all?—W. H. J., *Norwich.*

REPLY.—1 and 2. It is most probable the excitement is nothing more than the bees having a turn out to enjoy the warmth and sunshine. So long as they return quietly to the hive after their "fly," no alarm need be felt. 3. Zigzag entrances are supposed to assist the bees in defending their stores from the attacks of robber bees. We do not use or approve of them, and they are rapidly dropping out of use. 4. Well-made soft candy is of such a consistency that when the surface is scraped with the finger-nail it becomes soft and "buttery." It is, no doubt, easily broken when in cakes, but it should not be stone-hard.

[933.] *Dysenteric Symptoms.*—1. Wou'd you kindly examine the enclosed, and tell me whether it indicates an attack of dysentery? I have already lost one hive, but it was very weak to start the winter with. The cappings sent is what I have cut from one of the sealed combs. They had plenty of food left. The other little packet is a sample of the substance I have scraped from one of the frames. 2. Ought I to extract the honey before I fumigate the combs of the hive in which the bees died, and what would be the best way to do it? 3. How am I to clean the frames when all the drawn-out comb is there? 4. I read in the "Guide Book" that when bees are attacked with dysentery they ought to be changed into a clean hive. But how is it possible to do that in winter? Shall I not have to wait till the spring? I have another hive, the alighting-board of which is smeared with the same kind of stuff, but I don't see how I can touch the bees while the winter lasts. I should be more obliged than you can think of for an answer to above in next week's BEE JOURNAL.—R. YORK, *Southport, January* 12.

REPLY.—1. The sample of cappings sent plainly indicate that the stock which died was troubled with dysentery. 2. There is no need to extract such portion of the honey as is sealed over; or to fumigate combs containing sealed food. The latter may be kept as they are till summer time. Then remove the cappings (as for extracting), and give the honey to the bees for summer using. 3. Scrape the "soilings" carefully from the frame with a piece of broken glass before using them again, and any empty combs badly smeared by the bees should be cut out and melted down for wax. 4. If a clean, dry, and warm hive is available for the dysenteric stock still alive, it will be quite an easy matter to transfer the combs to it—as directed in "Guide Book"—any fine day when the bees are flying freely.

[934.] *Wells Hive.—Size of "Standard" Frame.*—I am much interested in the correspondence about the Wells' hive in the BRITISH BEE JOURNAL. Will some one be kind enough to give me some practical information on the subject, such as size, division-board, &c.; also, what is the size of the "Standard" frame?—ABERDEENSHIRE.

REPLY.—For practical information we must refer our correspondent to what has already appeared in our pages on the subject of "Wells" hives, division-boards, &c., including several letters from Mr. Wells himself. The "Standard frame" is 14 in. by $8\frac{1}{2}$ in., outside measure; with top-bar 17 in. long, $1\frac{9}{20}$ in. wide, and $\frac{3}{8}$ in. thick.

[935.] *Starting Bee-keeping.*—Being desirous of starting bee-keeping, would be glad to know when is the best time to begin, and what hive to have as best to suit a beginner who has all to learn about bees? I might say that in this part we are very subject to high south-west winds, and probably some hives would be blown over; those, for instance, with legs. What would be the cost of a swarm of bees, and where to obtain them? Would they require feeding? From your BEE JOURNAL there seems a great number of hives, skeps, &c., which are rather confusing to any one ignorant of these matters. Besides the writer has no money to spend on anything that flavours of fad; the idea being to collect the honey from flowers and to make the bees pay in some measure for the trouble taken with them. Any hints in your valuable journal will be esteemed by a a fresh hand wishing to start this interesting hobby.

Some say "use a straw skep," others a bar-frame hive; so I want you to tell me which is the best, and a general good way to manage them, their respective cost, &c. These particulars will be much esteemed by a well-wisher of your journal. I have only just come across the first number of it.—S. T. BADCOCK, *Bexhill-on-Sea.*

REPLY.—The best time to start bee-keeping is about the end of March, if an established hive is purchased, or early in June, if it is preferred to begin with a new hive and swarm of bees. Swarms cost from 10*s.* to 20*s.* and upwards, according to district, and to the variety of bees. Refer to our advertising pages for addresses of those who deal in bees. For a beginner, a complete book of some kind on bee-management is indispensable. The small handbook, "Modern Bee-keeping," is sent from this office for 7d. in halfpenny stamps, and the larger and more complete "British Bee-keepers' Guide Book" for 1*s.* 8d., both post-free. After reading up the subject, it will be less difficult to form your own conclusions as to the sort of hive to use; but, in any case, select as economical form of hive as possible, consistent with efficiency. We will gladly help you in any special difficulty which may arise, but it is obviously impossible for us even to initiate a beginner in so large a subject as that of bee-keeping in our query and reply column.

[936.] *Transferring from Skeps to Frame-hives.*—In what month, and what time of the month, is it best for transferring bees from a skep to bar-frame hive? I should be obliged for a reply in B. J.—P. L. RAWLINS, jun., *Market Harboro'.*

REPLY.—The *best* time for performing the operation of transferring referred to is twenty-one days after a swarm has issued from the skep, at which time the combs are generally quite free from brood or eggs, and consequently no loss of brood takes place. We assume that no transferring of the old skep-combs to the frame-hive is intended, but simply of the bees only. If, on the other hand, our correspondent's idea is to drive the bees and tie pieces of the old combs into the frames of the new hive, it may be done as soon in the early summer as the weather is warm enough for the bees to take early flights—say towards the end of March. We do not, however, advise the latter course, seeing how much better it is to have the frames filled with new straight combs built out on sheets of comb-foundation.

INSECTS AND FLOWERS.

AGENCY OF THE BEES IN CARRYING POLLEN.

Picking up a paper lately which treats of plants and flowers, I found these words:—"Pollen is borne from flower to flower on the breeze as well as on the bodies of insects; in fact, that seems to be nature's prime method of conveying the fertilising germs from the anthers of the staminate to the pointals of the pistillate blossoms." In another place, in the same paper, I find this:—"Honey is a vegetable production, appearing in greater or less quantities in every flower that nods to the breeze, or kisses the bright sunlight. It is secreted in the flowers for the purpose of attracting insects, thus securing the complete fertilisation of the female blossoms."

Now, while both of the above are true in the main, yet, when applied to certain plants and trees, they are *not* true; neither is it true that "every flower that nods to the breeze" secretes honey. There are some points in this matter which either I or other writers fail to understand, and as it has a direct bearing on our beloved pursuit (bee-keeping), perhaps a short article to draw others out, so that more light may be obtained, will not be amiss.

I understand that the first purpose for which the honey-bee was created was for the fertilisation of flowers, while the storage of honey was only for the preservation of the life of the bee, so that the perpetuation of the species might continue for this purpose (fertilisation of plants); that man, after a period of time, found that honey was good to eat, and thus utilised the product secreted by the flowers and stored by the bee by making it his food, while the bees perished from such colonies as were robbed by man; that, as the years went by, man learned that the bees would store more honey than their wants required, so surplus apartments were furnished the bees, which were removed when filled, thus leaving enough in the hive, or home of the bee, to supply all its needs; and that from this *surplus* came the honey of commerce and our industry of bee-keeping as we now enjoy it. If I am correct in the above (and I believe I am), the people of the world have the bee-keepers to thank for bringing the bee from its primeval home (the hollow tree, especially

as our forests are fast becoming obliterated by the advance of civilisation), and scattering it broadcast throughout the land, to fertilise the millions of flowers which otherwise would produce no fruit. But, to return to the two paragraphs quoted.

While I believe the bees were created for fertilisation of flowers, yet I also believe that not half of the different species of plants and trees require the aid of the bee to fertilise their flowers, and that only those which require the aid of the bee secrete any honey; hence, I said, that it was *not* true that every flower "that nods to the breeze or kisses the bright sunlight" secreted honey. In this we see the wisdom of the Creator—bees created to fertilise flowers which could not be fertilised in any other way, and honey placed in these flowers to attract the bees to them. Thus we have the clovers among grasses secreting honey, while the timothy, orchard, red-top, and other grasses do not secrete honey, for they are fertilised by the "breeze." All the fault I have to find with the first quotation is, that it is represented that both the "breeze" and bees may be needed to fertilise the same and all plants; while I believe that plants and trees which can be fertilised by the breeze do not need the aid of the bees; and that those requiring the aid of the bees *cannot possibly* be fertilised by all the breezes that ever blew. To be sure, bees sometimes collect pollen from many flowers which do not require their aid; but, as I said before, honey is secreted only by those which do. Take the flower of the squash, for instance. Gregory, who is certainly good authority, in his excellent treatise on this plant, tells us that squashes can be fertilised only by the aid of bees and insects, and proves the same by giving experiments tried, where fine netting was placed over the female flowers on certain hills, when not one of the flowers thus treated produced a squash, while the hills not so treated gave a good crop. Any one looking at a squash-flower will at once come to the conclusion that it is impossible for the wind to carry the pollen from one blossom to another; hence we find it secreting honey to attract the bees. Prominent among this class of flowers which needs the bees to fertilise them, we have the clovers, fruit-trees of nearly all classes, basswood (linden) trees, buckwheat, and fall flowers quite generally. Of the class that does not need the aid of the bee I will mention grasses of all kinds growing in this locality (except clover), grains of all kinds (except buckwheat), and most of the trees of the forest, such as beech, birch, ash, hemlock, &c. With the grain I would include corn. I know that some writers tell us that bees gather honey from corn; but after a careful watch for over a score of years I have failed to find a single bee having any honey in its honey-sac while at work gathering pollen from corn-tassels. If the stalks are bruised or cut in any way, sometimes there is a sweet substance that exudes which the bees gather; but this cannot be properly called the secretion of nectar.

In the above I have given my views regarding this matter, and stand ready to be corrected by any one who can show that I am wrong. I am no botanist, therefore cannot give a scientific article on the subject; but if there are any good botanists among the readers of *Gleanings* I (and I think all of its readers) should be pleased to hear from them on the subject. Knowledge along this line will help us to disarm the many jealous ones about us who seem to think the bees are injuring them by taking honey from the flowers. Let us keep it ever before the public that the bees are not only the bee-keeper's friend, but the *especial friend* of the farmer and fruit-grower. Thus doing, many of the troubles of the past will be saved.—G. M. DOOLITTLE, in *Gleanings*.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

J. M. READ.—*Bee Association for Sussex.*—There is, unfortunately, no Bee Association in Sussex just now, though we believe an idea prevails of attempting to revive the one formerly existing in that county, which in its time was very successful. There are, however, several professional bee-keepers in the county, whose services could be obtained for a moderate fee. You might write to Mr. C. Overton, Crawley, Sussex.

F. RATHBONE (Sutton Coldfield).—*Preparing Hive for Swarm.*—It is quite a matter of choice whether the frames are fitted with full sheets of foundation or with narrow strips (starters) only. For beginners starters are best, as risk of a breakdown with the foundation is avoided. The rack of sections should not be given when the swarm is hived, nor for some ten days after, unless honey is coming in very fast. It is only in good seasons that swarms are able to store much surplus during the first year of their occupancy of the hive; but the outer combs will probably be filled with honey, not *brood*, as you suppose. *Dead bees cast out of hives.* There is nothing unusual about this. More or less dead bees are always thrown out of hives at this season.

Several Letters, Queries, &c., are in type and will appear next week.

Editorial, Notices, &c.

USEFUL HINTS.

Weather.—The extraordinarily keen "nip" of frost so fully chronicled in our last "Hints" soon passed away, and we have since had an almost entire absence of cold weather, with many days of sunshine warm enough to bring out the bees in quite large numbers, besides causing them, even thus early, to begin displaying their foraging propensities about the fronts of neighbouring hives; thereby giving a "useful hint" to reduce the width of such entrances as have, so far, been left too wide for protective purposes from the attacks of would-be robber bees.

Honey Imports.—In view of the strong feeling aroused among our readers on the subject of foreign competition just now, it will be interesting to note, by way of comparison, the amount of honey imported into the United Kingdom in the years 1891, 1892, and 1893. In 1891 the total imports were valued at £38,427, and in 1892 the value reached the sum of £62,528 sterling, being an increase of more than £24,000 over the previous year. In 1893, however, the imports dropped down to £29,087 worth, a decrease in value of no less than £33,441. This is, no doubt, satisfactory so far as it goes, but we hope to see a still further diminution in the amount of foreign honey imported in future years, if the work of pressing forward the superior claims of the native product is continued and extended by our bee-associations in the spirit with which it has been begun.

Uniformity in Appliances.—A usefully suggestive note has just reached us from an esteemed Scotch correspondent—who had it in view to write for our pages a short series of letters on hives—useful as showing the danger of slackening our hold on the advantages secured by the adoption of a standard frame, which perforce carries along with it the benefits of uniformity in the supering arrangements and other appliances made to fit hives taking that frame.

Our correspondent says:—"I fear I cannot do what I proposed, viz., to write about hives, as I am afraid of touching upon subjects which seem to have caused some *heat* among your readers. For instance, I should have to mention frames. Well, my frames—made twenty-five years ago—are unfortunately not of the 'standard' size. They are quite good for the purpose, but if I had to get new frames and hives I should certainly adopt the standard size as being more convenient in many ways. If I have to buy a super, and I can buy from appliance dealers much cheaper than I can get them made by a local joiner, it is much better to order from a regular bee-appliance manufacturer, but his supers do not fit! The sections and section-racks are made to certain fixed sizes, and won't fit my hives; so that when I get them home, I have to alter the crates, &c., causing no end of trouble."

Government Help for Bee-keeping.—The announcement made on p. 22 of last week's issue is pregnant with interest for beekeepers, being no less than two important concessions to the Irish Bee-keepers' Association on the part of the Congested Districts Board, and also of the Commissioners of National Education in response to an application for assistance in the promotion of bee-keeping in Ireland.

The form in which State help is rendered, is very practical in its nature, and comprises, in the first place, the appointment of a well-known member of the I.B.K.A. as Instructor in Bee-keeping; the said instructor being also empowered to supply to suitable persons —subject, of course, to certain conditions —hives, bees, and appliances to enable them to start bee-keeping under very favourable conditions, and so give to intelligent cottagers and others a chance of adding to their incomes. The above work has already been begun, Mr. O'Bryen, the Inspector, having, early last year—by order of the Board—visited some of their districts, and started several persons with the necessary appliances and requirements, whose example will, no doubt, be largely followed when it is seen what can be done.

The second form in which State aid is rendered, as will be seen in the report, is

through the Commissioners of National Education, and it is here that we see most good for the future of our craft. Once let bee-keeping be recognised in the whole of our National schools situated in suitable districts as a subject for instruction, with payment to teachers by results, and we shall have rising up in our midst a generation of bee-keepers sufficiently numerous to extend a knowledge of the pursuit far and wide.

It remains, therefore, for bee-keepers to combine in order to have the benefits bestowed on the Sister Island extended to England, Scotland, and Wales. In a word, to ask for equal justice in this particular for all parts of the United Kingdom—and we will be thankful to Ireland for having led the way.

HONEY IMPORTS FOR 1893.

The full returns of the value of honey imported into the United Kingdom for the year 1893, according to the returns furnished to us by the Statistical Office, H.M. Customs, are as follows :—

January	£381	August.....	£2,660
February.....	1,133	September ...	2,911
March.....	1,086	October	951
April	3,590	November ...	2,332
May	2,991	December.....	1,862
June	6,676		
July	2,514	Total value	£29,087

DERBYSHIRE BEE-KEEPERS' ASSOCIATION.

The annual general meeting of the above Association was held on Friday, the 12th inst., in the Town Hall, Derby, J. L. P. Barber, Esq., J.P., C.C., in the chair, a fair number of members being present. The minutes of the last general meeting having been read and confirmed, and the usual votes of thanks moved and carried, the officers for the ensuing year were elected, his Grace the Duke of Devonshire, K.G., being re-elected President ; J. L. P. Barber, Esq., J.P., C.C., Chairman ; Mr. R. Giles, Vice-Chairman and also a Vice-President ; Mr. W. G. Copestake, Treasurer ; Mr. J. H. Richardson, Auditor ; and Mr. W. T. Atkins, Secretary. The names of Mr. G. H. Wilson (Little Cubley), Mr. J. Heath (Etwall), and Mr. G. H. Varty (Burnaston), were added to the Committee. The report and balance-sheet for the year were then read, from which it appears that financially the Association is not quite so flourishing as it was at the end of the previous year. Good work has been done by the experts during the past year, Mr. Handby looking after the members in the northern part of the county, and Messrs. Rowland and Joyce in the southern part. The season having been exceptionally good, a large amount of excellent honey was stored. During the year a grant of £50 was made to the Association by the County Council. Suitable apparatus had been purchased, and a series of lectures delivered in different parts of the county by Messrs. Coxon, Jones, and Wootton. A great deal of interest has been aroused, and the applications for lectures were far in excess of what the Committee could arrange for. The annual show of the Society (which was assisted by the Derbyshire Agricultural Society to the extent of £10) was held in September last, and proved to be one of the best ever held, the total weight of honey staged being slightly over a ton.

During the past year local Horticultural Societies were assisted by the County Association, who offered silver and bronze medals, and in same cases money prizes as well. An appendix to this report contains the names of members who have obtained certificates as experts, there being one first-class, six second-class, and six third-class. It appears that the distribution of the RECORD cost the Association last year the sum of £22. 9s. 4d. ; but after discussion which followed, it was almost unanimously resolved that the distribution of the RECORD was not to be curtailed, but that endeavours should be made to increase the revenue, and economise in some items of expenditure. The meeting then adjourned to Mr. Smith's Restaurant to hear a lecture on "Foul Brood," delivered by Mr. T. W. Jones (Etwall), First-class Expert, British Bee-Keepers' Association. The powerful lantern of the Association was used to show a number of splendid slides specially dealing with foul brood. The lecturer, in explaining the symptoms of the disease, showed clearly the difference between healthy brood and that affected with either foul or chilled brood. In speaking of the nature of the disease—a description of bacillus alvei, its size and other characteristics, and its action upon the egg—larva-pupa and the full-grown bee were explained. The means whereby Foul Brood is propagated were next dealt with. Whether honey or comb-foundation was capable of transmitting the disease was fully discussed ; also the vitality of the spores of bacillus alvei. The Queen, drone, robber bees, and the careless bee-keeper were in turn held up as being responsible for the spreading of the disease. The methods of cure were divided into three heads :—1st, cleanliness ; 2nd, disinfectants ; 3rd, medicated food. The lecturer then very concisely explained how he had successfully treated a diseased stock during the past season. A hearty vote of thanks was accorded to Mr. T. W. Jones at the close of a most instructive and interesting lecture. About twenty-five members afterwards sat down to a substantial tea, after which a general discussion on the

report took place, when it was proposed that a petition be presented to Parliament in favour of foreign honey being labelled as "Foreign Honey" in all cases.

W. T. Atkins, Secretary.

KENT BEE-KEEPERS' ASSOCIATION.

The annual meeting of the Kent Bee-keeper's Association was held on the 18th inst. in the Cathedral Library, Canterbury, the Very Rev. the Dean of Canterbury, in the unavoidable absence of the retiring President, Lord Sackville, occupying the chair. There was a good attendance of members, and the proceedings were marked by a general tone of satisfaction and confidence, even in view of the fact of a rather heavy deficit in the year's accounts. Among those present were:—Rev. T. S. Curteis, Rev. F. C. Villiers, Rev. F. T. Scott, Rev. G. W. Bancks, Messrs. E. D. Till, W. Broughton Carr, Col. C. E. Reeves, Messrs. G. J. Wright, Ned Swain, E. Palmer, T. J. Durrant, J. Garratt, &c., &c. The report was full of matter of interest, amongst which may be noticed the large increase of members during the past year, upwards of 100 having been secured; the appointment of additional local Secretaries; the striking successes of many of the members, the highest recorded being 144 lb. of honey from a single hive; the distinct advantage derived from the technical instruction provided by the County Council grant; and the scheme for organising the marketing of honey.

The services of Lord Sackville during his year of office were highly eulogised, the appeal for support for the Association, through the medium of the Press, being a most important one. The forthcoming Show of the Royal Counties Agricultural Society, at Canterbury, was referred to as an occasion for the members to combine to press the industry upon public notice.

The drawing for prizes, viz., a bar-frame hive and supering-racks, was duly carried out and resulted in favour of C. Hall (Sundridge), who won the hive, and W. Campany and — West (both of Hawkhurst), H. Bennett (Ashford), and J. White (Sheppey), who each receive a W. B. C. supering-rack.

The thanks of the meeting were given to the Very Rev. the Dean for his great kindness in placing the use of the Cathedral Library at the disposal of the Association, and for presiding at the meeting.

A considerable number of the members afterwards dined together at the Fountain Hotel, the Rev. T. S. Curteis, the Chairman of the Council for the past year, filling the chair.

BEE-SWARMING EXTRAORDINARY.

A Bedfordshire correspondent sends us the following extract from a local paper, without giving date of issue:—The paragraph relating to the extraordinary swarming of bees belonging to Mr. Thomas Bottomley, of Goose Eye, published last week was inaccurate in some particulars. We are informed by a practical bee-keeper that the facts of the case are something like these:—Mr. Bottomley commenced the present season with three old stocks of bees. From No. 1 of these old stocks there issued six swarms, as follow:—A first and second swarm, and from the first swarm issued a first and a second *virgin* swarm, and from the first virgin swarm issued another first and second virgin swarms, making in all seven healthy hives of bees. From the second old stock there came a first and second swarm, and from the first swarms issued first and second virgin swarms, making in all from the second old stock five healthy hives of bees. From the third old stock issued one first swarm, and from that swarm issued a first and second virgin swarm, making a total of sixteen hives of bees. Sir Isaac Holden, Bart., M.P., hearing of this unusual swarming, made a visit to Goose Eye this week, and saw the hives, in which he was much interested. The extraordinary occurrence is the result of an experiment.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The Editors of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "The Manager, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see 1st page of Advertisements*).

*** *In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

BEES IN CO. GALWAY.

[1,717.] Last season I had my first approach to a good one since I commenced bee-keeping, and am so pleased with the result that I mean to increase my stocks to fifty or more if I can get swarms, though my garden in this town is only 40 yards by 20. Still, I have realised £20. 6s. for section honey, and over 200 lb. in surplus frames still on hand, besides over 100 lb. in unfinished sections fed back. Whereas other seasons my strongest stock never gave more than 40 lb., my best hive this year gave 70 in sections and about 25 in frames, or near 100 lb. in all. My best swarm, one of three of English bees got for a cross with mine from Mr. Gibbins, of South Wales (seemingly a splendid strain of bees), gave me 44 first-class

and 6 middling sections, and about 25 lb. in frame honey, or about 75 lb. in all; and as (except one other year, long ago) I never got surplus honey from a swarm, I was very much surprised and pleased with my English importation, and intend to repeat it. Had I experience of what bees can do in a good year, I would have materially increased my returns. I have no trouble in getting sale for any number of sections. Need not send them until I have a purchaser, and like the price; this is owing to the first-class and satisfactory medium of sale I have experienced in Messrs. Carton Brothers, of Dublin. In Galway I have got 10s. per dozen, and in Dublin from 10s. for first-class to 8s. for unfinished sections. Whether it be in Galway or Dublin, I have been told my sections are the finest on the market, most of them weighing almost 18 oz., beautifully filled and finished, which I attribute to the use of grooved sections with full sheets of thin foundation. Out of 2,000 of those sections I had only one break down in three years, whereas with others I had complications without end. I gave some of those sections to a neighbour bee-keeper who was using others, and when taken out of the crates finished I could distinguish those I had given quite plainly. From an official return I see published, Galway is given as the leading county in Ireland last year in honey produce. We are having a very trying time just now for the bees. This spring two years fully half if not more of all the stocks died about here, leaving it very hard to get swarms since in the season for them.—T. KIRWAN, *Tuam, January* 15.

A VETERAN BEE-KEEPER'S REPORT.

[1718.] I wish to offer my thanks to our Editors for all the advice given to us bee-keepers in the past year, and at the same time to say how much I hope that our forward men in the craft will continue to give us the benefit of their "tit bits" of useful information, so helpful in managing our bees. Some of us get all the good we know of bee-keeping from the JOURNAL—at least I do, for one, though I cannot be considered quite a "beginner," since I had some four seasons at it so long as forty-five years ago. I would some day like to give my experience of those long-since passed days, if it would interest the young ones. However, after being unable to follow bee-keeping for many years, I began again nine years ago, and it is of these latter years I would now give a few particulars. In 1893 my stocks (spring count) numbered twenty-one, and thirteen of them being in frame hives and eight in skeps. I cannot boast of such big returns as from 60 lb. to 120 lb. per hive, like some readers, but am thankful for the blessings I did get from my bees. I was anxious for swarms last year, to get rid of some of my old queens, but not a single swarm came off, though I have never had my bees at such "boiling-over" strength at the end of April. But, owing to a fortnight's stormy time early in May, I lost a great quantity through their having to cross a large pond and clump of trees in order to reach a bean-field in bloom on the other side. Gallons of bees were blown into the water, and the loss thus incurred was never made up. However, I managed to get some very good bell-glasses and well-filled frames of honey. Altogether I got about 300 lb. of honey and 10 lb. of wax, and I have only a 1 lb. jar left, all the rest being sold and gone. I made it known in our village that any one bringing jars or bottles could have honey at 8d. per lb., and sold a lot in this way. I also got rid of some in bulk at 7d, and finally, having an offer of 6½d. for all left on hand, I cleared out, and got my money.

In conclusion, just a word about leaky hive-roofs. I used to be troubled with these, but have none now. My plan is to get old biscuit tins, and, after cutting open, hammer them out flat. With these I cover the roofs, allowing a good "overlap," tack them on firmly, and paint well after fixing. I paint mine of different colours, and think they look very neat when so done, and will last many years. With best hopes for coming season.—GEO. BREALEY, *Grendon, Northants, January* 13.

FOREIGN COMPETITION.

[1719.] The subject which appears to be agitating the minds of British bee-keepers at the present time is "foreign competition." I have for a long time past intended addressing you on this important subject, but apathy or—to be candid—laziness has hindered me doing so until now, when I am roused to activity by your own articles and letters in your columns from various correspondents.

As far as I am able to discern, there is a strong desire to divert into our own pockets the considerable sums of money which represent the value of honey imported from abroad; but however natural in itself the desire may be, its gratification, considering all the conditions which environ British bee-keeping, is practically impossible. If our prices are to be lowered down to the level which our foreign and colonial honey producers accept for their goods, and seemingly are satisfied with, our profits would become evanescent, and the business not worth the time and labour it entails. The best policy for us to adopt is to produce a high quality of honey at a reasonable, and at the same time a remunerative, price to that section of the public who will patronise us, and leave our foreign friends to cater to the other section, who like plenty for their money, and are not fastidious as to quality and flavour.

This is, I think, the best position we British bee-keepers can take up on this question. How far it will commend itself to

all I cannot say; but from what I have seen of foreign honey, I cannot entertain the opinion of those whose prejudice against the foreign article has no sound foundation if put to the test. Some samples of foreign honey are decidedly bad; but, on the other hand, qualities that will compare favourably with that produced at home may be purchased wholesale at 3d. to 4d. per lb. The inferior qualities are, of course, lower in price, and far from inviting in appearance, as may be imagined; but the chief reason why prices rule generally low is that there is, comparatively speaking, but a slow market for honey in this country. If British bee-keepers ever succeed in "educating" the British public to consume more largely this excellent food foreign honey will assuredly advance in price, while it is not likely the home-produced article will stand at a higher value than it does now. Our chief concern is to see that the foreign stuff is not substituted by unscrupulous dealers for British honey, and palmed off by the aid of false labels. Against this the Merchandise Marks Act does not afford us at the present time the slightest protection. Nothing can be easier than to "jar up," say, Chilian honey imported in kegs, label it "fine new honey," or some other attractive appellation, and the consumer, in the absence of definite information, be quite ignorant of the origin of the article he has purchased. This is not in keeping with the spirit of the Act, and as private consumers of honey by the keg of 1¼ cwt. are not to be found, and making allowance for that used by confectioners and manufacturers in bulk, which is not, as far as I can learn, considerable, it would appear that "jarring up" must be done by some one or other on a fairly large scale.

There are some who will say that if honey, whether British or foreign, is sold to consumers on its merits, no harm is done, which is in the main perfectly true; but at the same time it must not be forgotten that we who are endeavouring to encourage bee-keeping in this country as a profitable minor rural industry, and impressing upon all who take up the pursuit the importance of turning out a first-class article, are justly entitled to protection from the unscrupulous who may impose on the unwary an article not true to name for the sake of extra profit.—A. Doubavand, *Whitby Heath, Chester, January* 20, 1894.

FOREIGN HONEY.

[1720.] What a flutter of alarm and indignation has the Messrs. Abbott's advertisement aroused in the British bee-keeper's breast! One bee-keeper going to the length of remonstrating with the conductors of our Journal for allowing the advertisement to appear! "Much ado about nothing," sirs. Let the timid home producer sample the honey referred to and he will at once be convinced that he has naught to fear from the Sandwich Islander. It will take a very long time to get the average Briton to agree with the advertisers in their estimate of the merits of their "parcel." So long as the home product be clean, and its purity above suspicion, even so long, in my humble opinion, can the British bee-keeper hold his own, and allow his gaze to rest upon a foreign advertisement without disturbance to his peace.—J. Morgan, *Upper Boat, Pontypridd.*

BEE STINGS.

[1721.] It is seldom that we see any reference to the above subject in the pages of this Journal, the reason, perhaps, being that few suffer to the extent that I do. Last Friday the bees in my apiary were all out for an airing, and towards the evening I found some thirty or more on the ground near the entrance, apparently unable to rise. These I collected, and endeavoured to restore to their former vigour through the warmth generated by my hand: but, alas! as Mr. Webster would put it, *Nusquam tuta fides.* My hand, wrist, and arm swelled rapidly, and other unpleasant symptoms set in, and not feeling well enough to continue the repairs I was previously doing to some hives, I went into the house and rested. In the course of a few hours the irritation became so great that I determined to set out and see our doctor. Now, I am sure you will smile when I tell you he recommended me to use the "blue bag!" Of course, as is generally the case with all medical men, so long as there is no immediate danger in the case they are called to attend to, they do not over-exert themselves, but tell you to apply some old woman's remedy. However, he left me for a few minutes and returned, bringing with him a bottle of some lotion, and then handed me, with a smile, a smaller bottle, saying, "You are a little nervous; take a sixth part of this every four hours. When I returned home I applied the remedies; but, needless to say, these gave no relief, and it is not surprising, as the last bottle was some mixture in which ether greatly predominated. For two days I was unable to do anything. Now, such disastrous consequences to many of your readers could never be permitted, as it would interfere with their every-day occupation, and, therefore, there must be some remedy to which they resort to allay the inflammation. I shall, therefore, feel grateful to any like sufferer who will tell me what to do in such an emergency?

Hive Roofs.—I notice Mr. Webster's comments on these, but my experience rather leans towards that of "Lordswood." I have some hives that have had zinc roofs on for over seven years. The zinc is nailed on to the sides of the boards forming the roof, and

then hammered and turned down underneath. In this manner it will not buckle, nor do I find it too cumbersome, as they are all of the "Cowan" pattern. I shall be curious to hear the experience of bee-keepers who may be tempted to venture upon Mr. Simmin's "early swarming" project, but do not feel disposed to give it a trial myself after Mr. Woodley's remarks.—SALIX, *near Ware.*

BEES IN THE COUNTY KILKENNY.

[1722.] Now that the year 1893 is gone, and bee-work in the apiary is rather quiet, it may not be out of place for me to supplement my former reports with another of some rather remarkable things that came under my notice during the year. If you can afford space, perhaps some of it may be interesting.

One of my skeps showed signs of swarming about the middle of May, but the swarm did not come off so soon as I expected, so I supered it by placing a rack of sections on. The bees set to work in them and built comb in almost all; but honey stopped coming in, and eventually the swarm came off about the middle of June. The sections were removed and given to the swarm. The second swarm, however, did not issue until the nineteenth day after the first one, and even then it returned to the hive. It came out again next day and was secured.

As characteristic of the notions held by some old-fashioned bee-keepers here, I may mention the following:—A vagrant swarm came into a skeppist's apiary here, and hived itself in one of his hives having empty comb, early in the month of May. I offered the man a good price for it—more than it could realise for him when smothered at the end of the season, but "he wouldn't sell his luck."

The weather was very warm here in the valley of the Suir, part of the season, but August 16 was, I think, by far the hottest day, for when I visited my hives about noon there was great excitement amongst the bees, and, on closer examination, I found on the alighting-boards of five or six hives some yellowish-brown substance somewhat resembling hives occupied by bees suffering from dysentery after long confinement. I at once concluded that the intense heat was the cause, and opened a small space at the back of each, and placed a piece of perforated zinc over it. After this the bees soon settled down, but they began almost immediately to stop the holes. This strange stuff when first observed was soft and sticky, but by evening it became as hard as dry glue, and can be seen on the hives yet. I did not know at first what it was, but now I am satisfied it was the propolis, which melted with the heat, and was brought out by the bees somehow.

There was also observed on above date a line of straggling bees between my hives and the Rectory, a distance of about four hundred yards. So remarkable was it that some neighbours called me and said the bees were swarming. I found there was a considerable number of bees flying round, like a swarm looking for its queen. I watched them for some time, but did not see any swarm leaving my hives on this or following days; but the Rectory people found a swarm in one of their empty hives some days afterwards. Drones were remarkably late in making their appearance, and not nearly so numerous as other years. Some stocks began to cast them out about July 20, but ceased killing after some days, and the remaining drones were permitted to live on far into the season. In some instances drones were seen as late as the middle of October.

The skep, the history of which I gave in B.B.J. December 1, 1892 (p. 474, No. 1246), cast out its queen in August, and failed to raise another; consequently the stock has gone over to the majority. Wasps were somewhat late in making their appearance, but once here they were more numerous than I ever saw them before. They made no headway, however, against the bees further than to keep worrying them from early morning till late in the evening.—M. K., *Piltown, Co. Kilkenny.*

WEATHER FOR 1894.

[1723.] I enclose a cutting from the *Western Morning News* of December 28, 1893, and only hope, for the benefit of all bee-keepers, that these predictions may be realised. We shall then have another glorious honey season. — JOHN F. R. AYLEN, *Plymouth, January* 10.

[The cutting referred to reads as under.—EDS.]

"SIR,—The London correspondent of the *Western Morning News*, May 25, 1893, stated:—'Are we to have a second edition of the great drought? A "rain doctor," as the American call meteorologists for short, says yes. Here is his forecast, and his name it is Hugh Clements:—"In 1707, just 186 years ago, there was a drought exactly like that of this year. Both lasted for seventy-one days, the drought this year beginning and ending a week earlier. . . . . Lisle, the chronicler, states that in 1707 there was a drought from March 12 to May 22. . . . . From the exact resemblance of the droughts in 1707 and 1893, the same weather for the remainder of the year may be regarded as a certainty, but seven days earlier in its incidence than 106 years ago."' Your correspondent then remarks:—'The great merit of these predictions is their boldness. When they are wrong no one remembers them.'

"This last sentence contains a negative statement which is tantamount to saying that my brother's forecasts are remembered only when they are correct. I venture to assert that the opposite statement is nearer the truth, and more in keeping with the ways of the world—

namely, when they are correct no one remembers them; and apparently this has been exemplified by your correspondent himself, for we had 'a second edition of the great drought,' and, wonderful to relate, he never, so far as I am aware, remembered that the forecast referred to was quite correct.

"Seeing, then, that my brother has been correct not only in this instance, but in the great majority of his forecasts, perhaps your agricultural readers and the public generally would like to know the kind of weather which he predicts, on a scientific basis, for 1894. The forecasts are for London; but although the daily weather at that place is different to what it is here, nevertheless the general character of the weather for a whole year may be similar at two or more places when compared with the average local rainfall.

"According to him, 1894 will be a fine year —*i.e.*, in the sense that it won't be wet. Here are his monthly forecasts:—

"January will be a rather dry month.

"February will be a dry month.

"March will be a wet month.

"April will be a rather under average rainfall.

"May will be a dry month.

"June will be a rather dry and fine month.

"July will be a fine, dry, and hot month.

"August will be a fine, dry, and hot month.

"September will be about average rainfall.

"October will be about average rainfall.

"November will be rather under average rainfall.

"December will be a wet month.

"Judging from the researches he has made, the conclusions he has derived from those researches, and the principle—a principle which he was the first to discover—which has been found wonderfully accurate when applied to forecasting the weather for London during the last few years, I have every confidence that the general character of the weather for 1894, as stated above, will be found correct for London, if not, indeed, for the whole of the south and south-west of England.—D. CLEMENTS, *Truro, December* 26, 1893."

THE "W. B. C." END CONTROVERSY.

[1724.] It is not often I take up my pen to express an opinion on the many subjects brought before our notice in our BEE JOURNAL, but I feel sure I shall be pardoned if I say a word on the "W. B. C." end controversy now it is at fever height. Being a bee-keeper of over twenty years' standing, I think I may claim to have a slight knowledge of the craft, and I think amongst the modern appliances the "W. B. C." end ought to take its place in the first rank, both for usefulness and simplicity, and I utterly fail to see the use of trying to upset the decision, which cost our most able and experienced men so much time and thought to thoroughly work out and mature, and which I believe is universally acknowledged by most practical bee-men to give entire satisfaction. From my own experience (and I have something like 900 or 1,000 "ends" in my own apiary) I fail to see the necessity of having a "spur." I may say I always make my hives 14½ in. between inside walls, and very rarely indeed do I ever have a frame attached to the hive side by either brace-combs or propolis. Most accurately made hives are so constructed as to just take the 17 in. top bar, so that I cannot understand how the frames can move out of position towards the sides, if placed parallel with the entrance or towards the ends, if at right angles to it. I was very glad to see Mr. Meadows quoted in "Useful Hints" (p. 12), and therein giving his unvarnished opinion on the spur question, for, as our worthy editors there stated, the manufacturer is, without doubt, the most likely person to know if a "spur" is frequently desired. — J. WATERFIELD, *Kibworth, Leicester.*

"W. B. C." ENDS.

[1725.] Those whose hives require "spurs" to these can easily do without such mutilation by putting a screw (or tinned wire staple) into each of the outer sides of the frames just below the top bar. If these screws are not driven home, but are left projecting about a quarter of an inch, they will, of course, keep the frames at that distance from the hive sides, thus retaining the advantages given by the original "W. B. C." end, in allowing wide or narrow spacing, which are lost when the "spur" is cut.—EAST KENT, *Surbiton, January* 22.

[Referring to the above subject, another correspondent, dating from Carlisle, writes to say he overcomes any difficulty in using the "W. B. C." end with odd sized or inaccurately made hives, by simply driving in a ⅝ in. tack or a wire nail into the extreme end of each top-bar, and allowing the nail-head to project just so much as to regulate the distance between the side-bar of frame and the hive side.—EDS.]

METAL ENDS.

[1726.] I fail to see the utility of this controversy in the BEE JOURNAL, as each bee-keeper can have an "end" suited to his taste, or rather suited to the hive he uses. By all means let those in favour of the "W. B. C." end have it, but to bee-keepers who prefer an end with a spur, who perhaps, like myself, make their own hives and are not over exact in outside measurement, I would say procure from a respectable dealer the cast metal "Self-Adjusting Ends." They are the very thing amateurs require; and will be supplied at a cost a mere trifle more than other makes. If you have the inside measurement of your hive correct, you need not be over particular with outside measurement of either hive or super,

for the "spur" on these ends will do the rest. —M. K., *Piltown, co. Kilkenny, January* 20.

[We think the controversy on this subject may now be allowed to close.—EDS.]

MISCELLANEOUS.

[1727.] *Early and Late Preparation for Winter.*—Mr. W. Woodley's letter (1,709, p. 23) anent the above is both interesting and instructive, and a careful perusal of the same will, I feel sure, be beneficial to many. It is of vital importance that the bees should have a good supply of stores, plenty of warm packing, and all made snug long before winter begins. I am a great believer in preparing for winter early in the autumn, and always strive to have "all serene" by August 31.

Adulteration. — Another subject in Mr. Woodley's letter is well worthy of notice, viz., the "Bee-keepers' Defence Fund." As he rightly says, a few convictions would soon alter the state of affairs. What with foreign honey and adulterated honey, the bonâ-fide British bee-keeper has not a little to contend with. The question of the present day seems to me to be "How best to dispose of one's honey?" and doubtless this important matter will receive due attention during the present year. I maintain that all foreign honey should be labelled as such, so that the buyer may know what he is purchasing; and, as regards adulterated honey, that should not be countenanced at any price. Could we not form an Anti-Adulteration League?

Foreign Competition.—Doubtless all readers of the BRITISH BEE JOURNAL must feel grateful to you, Messrs. Editors, for the impartial way you have treated them by publishing the letters upon the above subject, notwithstanding they were all more or less adverse criticisms. More than one subscriber has remarked to me how delighted they are with the manner you "run" *our* JOURNAL, bar the inserting of *the* advertisement, which I must still own is a pill I cannot easily swallow.—PERCY LEIGH, *Beemount, Stoke Prior, Bromsgrove, January* 20.

Queries and Replies.

[937.] *Re-queening and Drone-breeding Queens.*—In my apiary I have two stocks of bees, which I will call Nos. 1 and 2. Last September they were both supposed to have queens over two years old, and, having a queen by post for introduction, I examined No. 1 and found it rather weak, queenless, and with a lot of drones but no brood. So I would not put the new queen in there, but opened the next hive, No. 2, which was in good condition, and I soon saw the queen, which I captured and put at once in No. 1 hive and closed it up. In the evening I introduced the new queen to No. 1, and next day both hives appeared all right from the outside, but, being so late in the season, I made no internal examination, but left them to take their chance. November 30 being a warm, sunny day the bees were flying freely, and I had a look round the apiary, and at No. 1 I found a lot of drones flying and saw the old queen come out, walk leisurely round the alighting board and then in again—showing that she had been accepted all right—but I made no examination of the hive. On January 11 last we had a very warm morning, so I opened No. 1 hive to see how the bees were getting on, not being able to understand so many drones flying on November 30. I found them rather weak, and the queen was on the first comb I took out, which contained a small patch of drone brood in all stages in *worker* comb; but there were no hatched drones in the hive. Do you think the old queen is any good to bring the stock on in the spring till I can get a young one?—SARUM, *January* 17.

REPLY.—The old queen cannot possibly "bring the stock on in the spring" if she is already a drone-breeder, as stated. Besides, if the stock was "rather weak and queenless" prior to her introduction, it would appear as if the bees will not be worth re-queening in spring.

[938.] "*A Curious Sample of Honey.*"—The honey, a sample of which I sent you last week (1708, p. 19), has not been heated at all. Nothing has been done to it. It was extracted and strained through double cheese-cloth, as the other, but being rather dark, it was put in jars with the object of selling it after granulating. It is part of my second take, extracted about the beginning of July. All the hives were not cleared when I took my first lot at the beginning of June; so it might contain some of the first ingathering of the bees. But the first lot I took has granulated (and is all sold), while this has not. The bees were not fed at any time last year. I cannot say much about the source. The district—the Wye Valley, where "the most beautiful scenery of its kind in England is to be found"—is extremely well wooded. There are also plenty of orchards, but I have never seen the bees touch the pear or apple blossoms, though I have watched them daily at the time when the bees ought to be at work on them. There is a lot of white clover about, and there are, each season, two or three fields of clover sown by farmers within reach. Some heather is found in the woods, and there is a common—the famous Buckstone—with much heather about one-and-a-half mile distant. Blackberry is plentiful. My bees gather a lot of honey about April from the woods somewhere, then they go somewhere else for another sort, and then another, and very varied were the samples they brought in last season, but this

is the stiffest of all. We like it much, and use it often, and each time with exclamations such as "What lovely honey," &c. It is, as you say, curious being clear and yet tough, so that it will stretch out in a string a yard long horizontally when taken on the knife out of the jar. I would be glad of your opinion of it.—H. RHYS, *Monmouth, January* 11.

REPLY.—We certainly thought the sample of honey sent had been heated to almost boiling point from the flavour and appearance. If there are fir trees in the neighbourhood it may account for its peculiar characteristics, as a small quantity of the honey bees collect from these trees might account for its clear condition, seeing that it does not granulate, besides being very stiff in consistency.

[939.] *Carniolan Bees. — The "Wells" System.*—I should be much obliged if some one would give me their experience of Carniolan bees. I have only the ordinary black bees at present, and I have nothing much to say against them, and would not like to mix the breed with any other kind of bees. 1. Would this occur if I procured some Carniolan bees and kept them near my other bees? 2. Can the Carniolan bee be easily distinguished from the other kind when out flying or on the alighting board? I suppose that it is the same with Carniolan bees as with others, viz., that there are good and bad strains, but I should be better pleased if some one who has found them a success would tell me something about them? 3. Now that my bees are going to "swarm in March and April" I am building a few "Wells" hives, and I should like to know how many holes are considered sufficient to make in the dividing dummy? 4. I find it very awkward moving the large, heavy racks of sections from the "Wells" hives; would it make a very great difference to the "system" if I worked two small crates instead of one large one? 5. Also I do not approve of queen-excluder zinc placed in the ordinary way, and to keep the queens separate I used last year a piece of queen-excluder zinc placed in a dummy frame, and fitted into the crate so as to divide it in two, and the bottom of this dummy to lie just on the top of the perforated dummy below. Is there any objection to this?—EARLY SWARMER, *Northampton, January* 19.

REPLY.—1. Yes. If Carniolan bees were introduced you would be almost certain to have a mixed breed of bees after the first season. 2. The Carniolan is easily distinguished when on the alighting board by the light-coloured bands on each segment of the abdomen. For information regarding them refer to BEE JOURNAL for December 14 last (p. 499). 3. Full particulars for making the "Wells dummy" are given in BEE JOURNAL for April 20, p. 153, and May 4, p. 171, of last year. 4. It is a perversion of the "Wells system" to use large section racks; one of the most important advantages being the securing of the combined forces of both brood-nests into an ordinary-sized surplus chamber or section rack. In this way work begins earlier, and is carried on more rapidly than if the progeny of one queen only was relied on. 5. Personally we object to any deviation from Mr. Wells' own plan of working, which we do not think can be improved upon in carrying out his "system."

[940.] *Hooks for Wiring Frames.*—Will you kindly inform me what kind of material is used for making hooks for wiring foundations shown in sketch in B. J. for April 20, 1893 (1,405, p. 157)? Are they sold by dealers?—G. G., *Cardiff, January* 15.

REPLY.—An ordinary $\frac{3}{4}$ in. light "wire-nail" is used for making the hooks, the bending being done with the help of a pair of "round-nosed" pliers.

[941.] *Patent Hives.*—I had commenced making a "Cowan hive," when a friend suggested it may be patented. I do not see anything of a patent mentioned in your "Guide Book," which I have. Would you mind saying whether the hive is protected by patent or no? I am taking in the BRITISH BEE JOURNAL, and intend to commence bee-keeping in the summer.—W. E., *Welshpool.*

REPLY.—We thought the third paragraph in first column of second page of cover made quite clear the fact of our having no pecuniary interest of any kind in the manufacture of hives or appliances. Any way, we have pleasure in stating that there is no restriction whatever about the hive in question, which may be made and used by any one.

[942.] *Joining Bee-keepers' Association.*—Believing that unity is strength, and being desirous of joining one of the Bee-keeping Associations, I shall esteem it a favour if you would put me into communication with the Secretary of either the British or Middlesex Association, whichever you consider the more advantageous for me to join. Let me here reciprocate the good wishes for the new year expressed in last week's BEE JOURNAL, and thank you for all the information and pleasure the reading your journal has afforded me for the past three years.—ALF. GUY, *The Hyde, N.W., January* 10.

REPLY.—It would, no doubt, be more advantageous to the cause of bee-keeping generally if our correspondent joined the B.B.K.A., of which Mr. J. Huckle, King's Langley, Herts, is the Secretary, and which sadly lacks funds just now. On the other hand, the advantages offered by the County Association are more direct or personal, by reason of including the services of the professional expert when on his tour of inspection of the apiaries of members. The Hon. Sec. of the Middlesex B. K.A. is Major Fair, Anlaby-road, Teddington.

Echoes from the Hives.

Daventry, January 12, 1894.—I thought possibly it may interest readers to hear an echo from my hives. To-day the bees are all alive and "kicking" in reality, as one was resting on my neck, and, getting underneath my collar, I experienced the first pleasure of the season in the form of a "kick." Last year I had a very few swarms, only two from eighteen stocks, and I naturally feel a little uneasy as to what the effect will be on the coming season, as there is a danger of spring dwindling owing to the queen's age. Up to the present, however, all my stocks seem to be strong and hearty to judge from the way they are flying to-day. I put my two swarms—they were late both of them—into a "Wells" hive in the first week in July. I got 37 lb. honey from it in shallow-frames, and left plenty for them to winter on, but, owing to the queens being worn out (I suppose from having such a long spell of brood-raising in the spring), they dwindled away, and while I was away from home in September, the other colonies started robbing, and when I returned home they were quite cleared out. Still I have faith in the "Wells" hive, and thank Mr. Wells for making known to his brother bee-keepers this system, instead of keeping his successes to himself as he might have done.—W. L. Bird.

Piltown, Co. Kilkenny, January 17, 1894. We had a fall of snow here on January 5, and on that night the thermometer registered 27 degs. of frost, and the glass covered over with snow. The night following the thermometer registered zero—or 32 degs. of frost (Fahrenheit); but the snow was swept off the glass from the previous evening, so I am afraid the poor bees must have suffered severe losses; in fact, I am sorry to say I have already pulled out very considerable numbers dead from some of my hives with a piece of wire. On the evening of 6th I closed up all the doors of my hives with snow. Next day we had a change for rain, and it has rained very heavy every day since.—M. K.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

Down East (Lowestoft).—Sugar as sample is quite suitable for bee-food, but the price (28s. per cwt.) is high.

H. W. Seymour, *B.B.K.A. Medals.*—Mr. Huckle, the Secretary of the B.B.K.A., will furnish you with the information required as to medals and certificates referred to.

J. H. Smith.—Sugar sent is no doubt *pure cane*, but, being unrefined, is not suitable for bee-candy. Raw, or unrefined, sugars are apt to cause dysentery in bees by reason of containing too large a portion of molasses, or treacle.

Percy Leigh (Stoke Prior), *Sample of Honey.*—Taking the "points" as enumerated, we would say 1. *Purity.*—Without an elaborate analysis, the actual purity of honey cannot be positively determined. The sender should be the best judge of that point if his own bees have gathered it. 2. *Aroma.*—This is completely hidden by that of the previous contents of the jar in which sample reaches us. 3. *Flavour.*—Not more than third-rate in this respect. 4. *Consistency.* Good for a granulated honey.

A. J. Bradstrut (Ipswich), *Dead Bees and Queen cast out.*—There is nothing very unusual in dead bees being cast out from hives in the winter months. The case of the hive from which the queen (as it unfortunately is) was cast out is, however, much more serious, and should be seen to as soon as warm weather justifies an examination, in order to ascertain if the stock under which the dead insect was found is queenless. The bees have traces of the Carniolan in them.

A Wife (Kent).—The size of shallow-frames is 14 inches by 5½, or, in other words, exactly the same dimensions as the standard frame, less three inches in its depth.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

FOR SALE.—The Owner, giving up keeping Bees, has For Sale four American Hives, bar frames; two Standard Hives by Baldwin, Bromley, Kent; one Double do. They are well stocked with Bees and packed for winter (1,000). One Uncapping Knife, one Centrifugal Extractor, six Feeders, two Smokers, Frame and Wedges for putting in comb, &c., all to be Sold a Bargain. Address, G. A. Farim, Dartmouth Lodge, Perry Vale, Forest Hill.

FOR SALE.—Four Dozen SECTIONS. What offers. T. Rothery, Tadcaster. c 76

WANTED, a good EXTRACTOR. Reversible action. Must be cheap. R. W. Eagleton, The Apiary, Parson Drove, near Wisbech. c 75

WINE.—A few Dozen Bottles and Half Bottles of Light BURGUNDY FOR SALE at a very low rate. Bottles 14s., half bottles 8s. 6d. Cases to be returned. Half bottle sent as sample on receipt of 6d. for postage, which will be refunded if order results. Cash with order or deposit system. W. Read, 12, Savage Gardens, London. c 74

EXTRACTED ENGLISH HONEY in ¼ cwts, 6d. and 7d. per lb. Tins free. Sample 2d. deposit. Richard Dutton, Terling, Witham, Essex. c 77

AN APIARY FOR SALE, consisting of 27 Stocks, Bees in Bar-frame Hives, a large quantity of empty Hives, Honey Extractor, Wax Extractor, and all appliances. These are being sold in consequence of death of owner. Will be sold in quantities to suit purchasers. Mr. Mason, The Apiary, Little Cressingham, Watton, Norfolk. c 78

Editorial, Notices, &c.

THE FOREIGN COMPETITION QUESTION.

The interest taken by bee-keepers in the question of Foreign Competition—and the extent to which it may affect the price of honey and consequently the profits of the industry—constitutes, as we think, a sufficient reason for our dealing with the subject; and also for hoping that we shall be enabled to remove some, at least, of the erroneous impressions entertained with reference to the best mode of dealing with it.

The correspondence which has reached us is somewhat more voluminous than appears in print, but, so far as we can gather, the majority of our correspondents rather fail in grasping the difficulties of the situation. They appear to consider it a comparatively easy matter to get a law passed compelling sellers of foreign honey to label it as such, but give no thought to showing or devising a practical scheme by which their ideas could be effectually carried out.

We heartily wish it were otherwise, but calm reflection compels us to admit that at present we see no possible plan by which British bee-keepers could have their interests protected in the way suggested. Let us instance a case, with the particulars of which we have some personal knowledge:—A shipment of South American honey—say, fifty or a hundred barrels—is landed at the docks in Liverpool, consigned to a firm of produce brokers there. Each barrel is sampled, and from these samples is sold by auction at the Brokers' public sale-room to the highest bidder. Of course it goes to large buyers of honey, such as wholesale chemists, or those using it extensively for manufacturing purposes, or to wholesale honey dealers.

Now, we would ask, what conceivable method of watching, supervising, or following up, could be devised by which ten or more tons of honey could be so controlled as to ensure that every purchaser of a pound jar should be informed of its foreign origin?

When one remembers the condition in which the honey referred to is imported—sometimes containing the bodies of crushed bees and other extraneous matter—and considers the melting, refining, blending,—sometimes with British honey—and other operations through which it passes before being "jarred" for sale, in the hands of those who buy it in bulk, the difficulty of tracing it all through seem to us insurmountable, and, when combined with the ease by which the "law" might be evaded, render it impossible to conceive a workable plan of the kind suggested. In fact, the reply of most thinking men, if asked, would, we opine, be in line with that of the old bee-man who, in answer to a question of similar import replied, "It's no use thinkin' 'bout it, it can't be did."

Referring to another aspect of the foreign competition question, we have been taken to task by one or two correspondents for permitting foreign honey to be advertised in our pages in a way which strikes them as tending to inflict injury on the craft. We venture to think, however, that our critics take rather a surface view of the matter, or they would see our action in a different light. We yield to none in the desire to promote the true interests of British bee-keeping, and feel certain that far more harm than good to the pursuit would have ensued had we acted otherwise than we did. Indeed, the immediate result bears out this view, for as the matter now stands, readers are aware of what they have to contend with, and a commendable spirit of activity has been aroused in the taking of measures to prevent foreign honey being sold as British, so far as marking the genuine article in unmistakable fashion, and placing the native product more prominently before the public.

From one quarter whence comes adverse comment in the line referred to; we are also told that "a ring has been formed for the purpose of keeping up prices," and rather than that cottagers should put their honey on the market at a lower rate, those forming the "ring" buy it up and deal with it themselves. Now we venture to say that in so doing our friends make a grave mistake. *That* is not the way to promote British bee-keeping. The point—the main point—is to increase the consumption of our home-grown honey by making its use

popular with the people as an article of food, and that cannot be done by the formation of "rings" to keep up prices. Our view of promoting the industry is to increase the number of consumers by placing good British honey within their reach at the lowest *paying* price.

Let us first get the people to like honey, to make it an article of daily consumption in the household. Give up the idea of adopting a policy which would restrict it to the wealthier classes, or only as a luxury to others. And when we have succeeded in increasing the number of consumers ten or twenty fold the latter will learn to distinguish between good and bad honey, and be willing to pay the highest market-price for the best. It is quite certain that narrow or selfish methods of dealing with the question will not help our case one bit. We must take a broad or "business" view of it if any headway is to be made, and the general good of the pursuit promoted. "Rings" for the purpose stated will only act as checks to progress.

If the demand was everywhere equal to the supply, the "prices" trouble would not be felt, but until this desideratum is secured honey values must vary.

And now, leaving the subject of prices, we return to that of the best means of affording protection to the British bee-keeper in so far as giving him a means of preventing foreign from being sold as "British." It is quite absurd to talk of preventing foreign competition, simply because that is impossible, but, so far as affording a means of identifying the native or home-grown product, our opinion is that the most effective method of securing this object is by labelling and guaranteeing the genuineness of all honey sold by or through the agency of our country Bee Associations. This there would be little difficulty in doing by a plan already successfully working in one county, and now being formulated in another. And in urging all Associations to take up the idea, we, and they, may take heart of grace in reflecting that the value of the honey imported into the United Kingdom in 1893 was less by more than one-half of that for 1892, the actual figures showing a reduction of £33,441 in the value of last year's imports in a total of £62,528 worth in the previous year.

We are fully persuaded that if our county Associations would take up the question in the interest of their members, and set to work perfecting a scheme for labelling members' honey, giving it a "trade mark" in the legal sense—by registering the design of the county label—and numbering these labels consecutively so as to keep a record of whose hands they pass into for use, and, further, take steps to establish agencies for the sale of honey throughout each county, they would not only promote the sale of, and consequent demand for, British honey, but would also forward their own prosperity by an increase of membership.

Besides, in so doing there would be no need for imposing restrictions on members as to prices, or of interfering with private sales in any way. The "dealing" would be direct between buyer and seller, and no "fixed" prices need cause trouble. In fact, the only condition imposed would be insisting that the county label be affixed to good British honey only, in all other respects the seller dealing directly and having a perfectly free hand in treating with the retailer.

In a word, to let foreign honey look after itself, and devoting our energies to the promotion of the genuine British product, seems to us the most effective and —to use a "British" term—the most "fair and square" method of facing the foreign competition question.

BRITISH BEE-KEEPERS' ASSOCIATION.

Committee meeting held at 105, Jermyn-street, on Wednesday, 24th inst. Present, Hon. and Rev. H. Bligh, H. Jonas, J. H. New, E. D. Till, Rev. R. Errington, W. B. Carr, J. Garratt, Major Fair, W. O. B. Glennie (Treasurer), Rev. W. E. Burkitt, and J. M. Hooker, ex-officio, John Huckle, Secretary.

In the absence of the Chairman and Vice-Chairman, Mr. Jonas was voted to the chair.

Communications were received from the Chairman, Vice-Chairman, Rev. Dr. Bartrum, and Captain Campbell, regretting their inability to be present.

The minutes of the last meeting were read and confirmed.

The statement of accounts for the year 1893 were presented by the Chairman who explained that the accounts had been duly audited, but required a slight correction previous to receiving the Auditor's signature

Resolved that, subject to the statement being signed by the Auditor, Treasurer, and Secretary, the same be printed in the Annual Report.

The Chairman presented a Special Report on behalf of the Finance Committee in respect to the financial position of the Association. Statistics were given showing that the income of the Association had steadily decreased, more especially from subscriptions, the chief cause being that many members had transferred their subscriptions from the parent to the Affiliated Associations. With the view to improve the financial condition of the Association, the Sub-Committee recommended :—(1) That corresponding or representative members be appointed throughout the United Kingdom; (2) That the privilege of receiving a silver and a bronze medal by the Affiliated Associations be withdrawn for 1894, the Sub-Committee being of opinion that the Affiliated Associations would readily acquiesce to assist the parent society in this way; (3) That the entrance-fees payable by experts for examination be as follows :—third class, 5s.; second class, 10s.; first class, 21s., half of these amounts to be returned to unsuccessful candidates. Resolved that the report be received and adopted.

Letters were read :—1. From the Secretary of the Royal Counties' Agricultural Society promising a subsidy towards providing for an exhibition of hives, honey, &c., at the forthcoming Exhibition to be held at Canterbury. Resolved, that the same be accepted subject to the co-operation of the Kent Association. 2. From the Secretary of the Bath and West of England Agricultural Society intimating that the Council of that Society would probably give assistance towards lectures, &c., in the bee tent at their annual Exhibition to be held at Guildford, but no proposal for further assistance towards an exhibition of honey, &c., could be entertained.

Letters were also read in reference to the formation of an Association for the district of Northallerton, in Yorkshire. The Secretary reported that he had, in accordance with the rules of affiliation, communicated with Mr. Grimshaw, Secretary of the Yorkshire Association, in reference to this proposal.

During the discussion on matters of finance and the need for paying off some of the most pressing liabilities, the Chairman stated that a friend of a member of the Finance Committee had offered to give £10 towards that object if by June 24 next a further sum of £50 can be collected in sums of £5 and upward, and thus relieve the Committee from the regrettable, but imperative, necessity of recommending the withdrawal of the reserve fund in the Post-office Bank.

Fifty pounds is not a large sum, and, if the hoped-for contribution from some of the City Companies may be counted on, it behoves all members to exert any influence they may possess with members of these Companies, and, in addition, to club together and endeavour to send up sums of £5 or more to the Secretary. Any surplus can be added to make up other £5 sums as stipulated by the generous donor, who proposes to help the Association in keeping intact its reserve fund, which has hitherto sustained its financial credit.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C." (see 1st page of Advertisements).*

**** In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1728.] The forecast of the weather for 1894 (on p. 17) is eminently satisfactory from a bee-keeper's point of view, and if it should only prove approximately correct we shall have much to be thankful for. In anticipation of the good time coming, let us, then, be up and doing. There are many things that can be attended to now during the slack season, when we can devote the necessary time to do the jobs well, whereas, if delayed until busier times, when the bees, and other out-of-doors work also, require our attention, then oftimes these repair-and-alteration jobs are apt to be either done in a slipshod manner or left over till another year. Therefore I say, Don't procrastinate.

Bee Swarming Extraordinary. — Cannot our correspondent (p. 33) throw more light on the above? The year 1893 was not a swarming season in the ordinary sense of the term. What can this experiment be that produced bees in such numbers when other bee-keepers in some cases had no swarms at all? Stocks will begin breeeding—in fact, strong, healthy colonies have already begun—and I would advise giving a supply of water, of which increasing quantities will be required as we get nearer the spring, and if your bees take to the watering-places when first they begin to forage for it, there will be no difficulty with them all through the season. Spent tea-leaves or moss placed in shallow pans in a sunny spot in the apiary will save the lives of a great number of bees in the early spring. Where there is a good supply near the hives it will, of course, be lost labour to provide a special

watering-place, but it is useful when the bees have to fly a distance for it, especially in bleak situations.

Swarms in March and April.—The district in which the bee-keeper is located will decide for him if it will remunerate him to produce bees very early in the year. I maintain that in any ordinary season it is of no use to have hives full of bees early in May, when the first honey flow does not begin till second week in June. I do not assert that the bees do not gather honey before, say, June 10, but I do say they rarely store anything in supers before that date—early seasons excepted—therefore, the contention of "Mr. S. S." (1,698, p. 15) that I should not have to keep them, does not hold good. If I did not keep them they would starve, unless there was honey to be had, and suitable weather to gather it in. I acknowledge that Mr. Simmins's plan will produce the swarm in addition to the old stock, but, as regards the balance to the good at the end of the season, we cannot be so certain. Of course, an increased output to the tune of 100 per cent. looks very tempting, and on the premise that prices for honey have a downward tendency, and each bee-keeper in Britain, through the aid of the system referred, to produced the double quantity, prices would still go to a lower level. The apparent standstill of the number of bees in a colony during March and April is consequent on the work of nursing, fielding in search of pollen and water, and some little honey from the scattered flowers. This laborious work keeps down the increase of the colony by the heavy death-rate consequent on the aged bees dying off, and many of the earlier bred bees getting lost on foraging expeditions in stormy weather.

Spring Dwindling.—To those who have had a run of bad luck in getting their stocks through the spring I would commend Mr. Simmins's pamphlet. They will, I think, find a cure for such mishaps, or at least a preventitive, if the directions are faithfully followed. The system will probably use up a prolific queen very quickly, but that is a small matter compared with the loss of a stock or two of bees after they have reached the sunny days of spring.

Old foundation has been proved to be nearly if not quite equal to newly made by some of our American brethren in the craft, and I myself can fully endorse what they say on the point, and my experience has been with both kinds, *i.e.*, for brood and super. I have had some two years old, and when used I have never been able to detect any difference between the combs after it was worked out by the bees. Of course, when we consider the high temperature of a hive crowded with bees or a new swarm gorged with honey closely clustered, as when wax producing, common-sense would tell us that the sheets of wax would soon become soft and pliable, and as easy of working up by the bees as that only just received from the maker. I have noticed from time to time that bee-keepers complain of their bees refusing to work out some of the very white coloured foundation. There may be two or three reasons for that; the wax may be bleached, and bleaching hardens wax, then diluted soap may be the lubricant used in passing it through the rollers of the machine; this may be offensive to the bees. Other reasons could be given, but I think these are enough to account for bees sometimes refusing to have anything to do with the foundation.—W. Woodley, *Beedon, Newbury.*

THE NEW WIDE "W.B.C." ENDS.

[1729.] I received one of these yesterday from Mr. Meadows. It is $1\frac{7}{8}$ in. long. I thought the principle adopted for determining the length was that eight frames fitted with the wide ends should occupy the same space as ten frames with the $1\frac{9}{20}$ in. ends, and it is an excellent principle that they should do this exactly, so as not to disturb existing arrangements of room for frames, slips, or dummies, whereby so many shallow frame-boxes accommodate ten frames spaced at $1\frac{9}{20}$ in. Now, to effect this desirable result requires the new ends to be $1\frac{13}{16}$ in. in length, this length multiplied by 8 being exactly that of $1\frac{9}{20}$ multiplied by 10—namely $14\frac{1}{2}$ in.—whereas the adopted length of $1\frac{7}{8}$ in. multiplied by 8 gives 15 in.

If I am correct in saying that, what with propolis and necessary ease of working, eight frames with $1\frac{7}{8}$ in. ends would not be workable in 15 in. space (for instance, in the "W.B.C." hive shallow boxes, of which I have several), it follows that any box not exceeding 15 in. of space will not accommodate eight frames with $1\frac{7}{8}$ in. ends, and will require undesirable arrangements for utilising or filling-up the waste space caused by only using seven wide frames. In square hives having 17 in. space, possibly nine frames $\times 1\frac{7}{8}$ ends $= 16\frac{7}{8}$, may be squeezed in; but I should say that $9 \times 1\frac{13}{16} = 16\frac{5}{16}$ would be more workable for such hives. If my deductions are correct, namely that $1\frac{13}{16}$ ends will suit best, the majority of cases, I trust that, although the dies are made for the $1\frac{7}{8}$ in. ends, nothing will stand in the way of the alteration.

If I am wrong, please correct me, and explain how I should work with the ends in the two sizes or boxes I have named, of which I have both for next season, for I am still only —A Lancashire Novice, *January* 27.

[There must be an error in the measurement of the surplus boxes used by our correspondent. To take ten frames the box should be 15in. *full* by $14\frac{1}{2}$in. inside measure. Now, 15in. from side to side takes ten frames with the ordinary "W.B.C." ends affixed, and two slips of wood $\frac{3}{8}$ in. wide, one at each end. These

slips are necessary in order to increase the distance between the outer combs and the sides of the box, the ¼ in. shoulder of the end to prevent brace-comb being built.

With the wide end (1⅞ in.) these slips are not needed by reason of the wider shoulder. Like our correspondent, we, too, have received samples of the new end, and were very pleased to find that eight frames, when fitted with them, occupied exactly the same space as ten with the ordinary end.—EDS.]

FOREIGN HONEY.

[1730.] In reading the letters in last week's issue, *re* foreign honey, one almost wonders if your correspondents have read the appeal of the British Bee-Keepers' Association Committee aright; when they speak of the promotion of Home Industries—should it not be the Sale of Foreign Honey? No doubt our Editors were on the horns of a dilemma *re* the advertisement of Messrs. Abbott Bros., they being one of the largest advertisers in the JOURNAL, but where the advantage to British bee-keepers comes in I, for one, cannot see; and how can British bee-keepers be expected to support a firm who, on the strength of their reputation, tempt them by claiming it to be the best, or one of the best samples of foreign honey they have handled? If it is the best, I pity those who eat the worst. I sent for a sample and asked the good wife to test it (the origin being unknown to her), and she declared it to be "brown sugar kept in a wet place." We shall never know the full extent of the injury to British bee-keepers by the Abbott advertisement appearing in our paper. Let me give a case in point:—In this corner of Worcestershire we have formed a ring not to sell under 1s. per lb., and would sooner buy cottagers' honey up than have it on the market at a less price; but some of the foreign stuff found its way into our neighbourhood, and when sampled they were glad to find bottles, pay carriage, and sell at 6d. per lb. to get rid of it. Now comes the harm; customers who had bought at our usual price of 1s. hearing of the sale of pure honey at 6d. per lb. say they will pay 1s. no more, and one who bought at that figure took it back asking "what doctored stuff was being charged at 1s. per lb.," although I believe it was pure English honey.

Passing by a Cottager's home whose bees I had driven last autumn, I left him a BEE JOURNAL, and unfortunately it was one with the objectionable advertisement, and when I called some weeks after I was greeted something like this: "I say, Mr., wul them the e fokes up Lun'on sell pure honey at 4½d. per lb.?" "Yes." "Then it's no good yo a tryin' to drive them new fangled notions into my yead, for I'hn got 25lb., and if I cornt get 9d. it shall stop where it is." Why should we producers buy the foreign stuff? Is it to mix with the genuine article and sell as pure English honey? If so, alas for British honey! Go at it "E.H., 1712," also "Percy Leigh, 1714."—C HARVEY, *Stoke Prior, Worcestershire.*

[Notwithstanding our correspondent's concluding exhortation, we trust readers will agree with us in thinking that enough has now been said on the subject mainly dealt with; but as a final word on our part, and with reference to the advertisement mentioned, our correspondent is mistaken if he supposes that it appeared because the firm in question are among our "largest advertisers." It appeared because it was a bonâ-fide advertisement sent us by a well-known and respectable firm, who know their own business better than we do. Besides, however rigidly—and stupidly as we think—we might exclude such advertisements from the pages of the B. J., it would not stop the importation or sale of foreign honey one iota. Moreover, as we have said elsewhere, we do not consider that our British Bee-keepers have anything to fear from such foreign stuff as our correspondent describes this to be. Quality regulates price, and good British honey is worth fully as much more than that advertised as is asked for it.—EDS.]

SOMETHING LIKE AN EARLY SWARM.

[1731.] It might interest your readers to know that Mr. George Hodges, Mastock, has already had his first swarm for the year 1894. In answer to questions I forwarded this gentleman, I learnt that the swarming took place on January 11 from a late July swarm of 1892, and is the first swarm from it. This stock was then hived in a skep, though it issued from a bar-frame, and the present swarm is now being fed in a straw-skep, and are doing well.—ALF. WOLFE, *Hon. Sec. Taunton and District B.K.A.*

[It need hardly be said that the above must not be accepted as a natural or—perhaps, we should say—normal swarm.—EDS.].

NOTES FROM NORTH HANTS.

[1732.] The past year in this part has been a poor one for bee-keepers, and the honey crop was below the average. Bees were very strong in April, and swarms were expected early in May, but, contrary to expectation, they were very scarce—skeppists who depend on swarms for their honey were in the same plight, and so there were few driven bees to be had. I drove fourteen lots that would have been "brimstoned," and the best only weighed 33 lb. Two were queenless; had no honey and few bees, and the average weight of the lot was 16 lb. per hive, hives and combs included, proving that bees in skeps have done badly, and I am afraid that many of those left will not last till spring. Frame-hives have done better than skeps, for my average is 26 lb. per hive. The

honey gathered in May and the beginning of June was of good colour and quality, but after the second week in June it was nothing but honey-dew, and nearly as black as ink, but it sold at 6d. per lb. notwithstanding.

My "Wells" hive was a failure. I stocked it early in spring with two strong lots on ten frames each, but I only got four sections from them. I shall, however, give the system a fair trial with three hives this year.

Sandwich Island honey at 4½d. per lb., "no charge for tins or cases." Not much chance for us there, for I am sure no British bee-keeper will attempt to compete with such a price as that, and it sets us wondering what price per lb. could have been paid to the producer of the honey in the first place.—H. ROWELL, *Hook, Winchfield, Hants.*

COVERING FOR HIVE ROOFS.

[1733.] In your paper of January 25 a correspondent (page 35, No. 1721) writes about zinc sheets covering his hive roofs. No doubt they will keep the rain out, but will they prevent damp from the hive forming on the underside of the zinc?

About fifteen years ago I placed my bee-hives in a roomy beehouse covered with sheets of corrugated metal. The heat from the hives, or the greater heat in the beehouse caused a dew to form on the underside of the corrugated metal. This dropped in two or three places about the beehouse, and to prevent accidents I placed a sheet of metal over each hive loosely. The result was that a great deal of damp formed on the underside of the loose sheets, doing a deal more damage than anything experienced before. I raised the sheets of metal, gave them a bend, and rested them on screws, and they did not touch the wood, and what damp there was ran down without wetting the top of the hive.

Now, I feel pretty sure that any sheet of metal exposed to the cold on one side, and damp heat from bees on the other without proper ventilation, cannot fail to have a dew forming upon its underside. I mention this because I very much fear that, though your correspondent will keep out the rain, he will keep in the damp.—F. M. E., *Ecclefechan, N.B.*

BEE STINGS.

[1734.] I was sorry to see from the remarks from "Salix, near Ware" (1721, p. 35) that bee stings trouble him so much. I do not think he can have been "inoculated," or they would not punish him so. I am glad to say I do not swell much when I get stung now, although I used to a few years back. I think that after being stung a number of times one's system gets as it were impervious to the poison. Nevertheless, I think the two best remedies for a bee sting are to well dress the spot with vinegar, or moisten some washing soda with water and rub on the place where the sting was, first scratching out the sting. I say first scratching out the sting as it is better than pulling the sting out, as by pulling you squeeze what poison there may be left out into the wound.

I should like to hear an opinion on Mr. Simmin's pamphlet "Bees Swarming, &c." Whether the practical result would be as beautiful as the theory, I do not doubt but what it would be possible to get the frames filled with eggs in the stock that was highly stimulated, but are you always sure of getting them nursed in another stock unless they are stimulated as well? I am afraid there would be a great loss of brood (or eggs) as well as wearing out the queen of the highly stimulated stock, and so rendering them useless for honey gathering.—W. L. BIRD.

MARKETING UNFINISHED SECTIONS.

[1735.] To bee-keepers who may have a quantity of sections not filled down to the bottom, this is how I put such up for the market. I remove the bottom side of section, and fix two or three together with a strip of wood and small screws across each end. When such are glazed and papered in the usual way, they take the market readier than if put up with the gap at the bottom. In fact, they appear like little supers, and are very suitable for making up a honey display. I see by the JOURNAL some bee-keepers would like a spur attached to the "W.B.C." end. Apparently they don't know there is a tin-end in the market that spaces the frames both ways. I refer to the "J.H.H." end. Many amateurs have neither the tools nor the time to make everything about the body of a hive accurate; to such, an end that spaced the frames both ways is an advantage. If I used a metal end, I think I would prefer one that spaced both ways for several reasons apart from accuracy.—W. HOGG, *Castle Douglas, January* 22.

[We fancy our correspondent is in error with regard to the "J.H.H." end. Is he sure that it "spaces the frame both ways?" —EDS.]

HONEY AND RASPBERRIES.

[1736.] Bee-keepers ought to grow large, luscious raspberries. It is a fruit that never disappoints us; other fruit may be a failure in some seasons, but the raspberry is like the poor—we have them always. Raspberries such as a bee-keeper can produce find any quantity of purchasers, and always command a good price (they are never a glut, like strawberries). If we cannot double our stocks of bees every year we can double our plantation of raspberry canes without cost, except planting from the old stools. Cottagers often look

to the raspberry to pay the rent of cottage and garden, and make a jam for the family costing about 1½d. per lb.

Mr. Dobbie says: "The raspberry is a honey-producing shrub. Honey value, 60 per cent.; pollen value, 10 per cent."

Langstroth says: In flavour its honey is superior to that from white clover, while its delicate comb almost melts in the mouth. When in bloom, bees hold even white clover in light esteem. Its drooping blossoms protect the honey from moisture, and they work upon it when the weather is so wet that they can obtain nothing from the upright blossoms of the white clover.

Raspberry flavours any fruit mixed with it, and is used for making raspberry vinegar, which is used for bronchitis, &c. Raspberry jelly mixed with honey, eaten with bread, is delicious, and appreciated by old and young. For a cold or suffering from influenza, get a lemon, peel it, then slice the lemon into a pint jug, half fill the jug with boiling water, sweeten with honey, and add a dessert-spoonful of raspberry jelly; drink it hot at bedtime and any time when thirsty.—T. HOLLIDAY.

FOREIGN BEES.

[1737.] What has become of the foreign bee craze which was so marked a few years ago? If any one will search your advertisement columns, and also your correspondence, he will see very few references of late to the once-boasted claims of superiority urged for Ligurian and Carniolan bees. Years ago I tried the latter, and I found they increased amazingly, but gave me no surplus honey, and I therefore rooted them out of my apiary "neck and crop." One thing I cannot understand is why Ligurians are useless in this part of Great Britain. Our country is wild and mountainous, and these bees seem unable to hold their own, although in some more cultivated parts good results are reported from pure-bred stocks. Several bee-keepers about here have tried them, and almost all report failures.

I think if bee-keepers would stick to our own well-tried and acclimatised British bee with an annual *change of blood*, by buying queens or swarms, they would find their results thoroughly satisfactory.—EDWARD J. GIBBINS, *Neath*.

LECTURERS' ERRORS.

[1738.] That lecturers do perpetrate such errors as mentioned in my own and other correspondents' letters is unhappily only too true. Competent, practical lecturers are, perhaps, not very easy to secure, and Bee-keepers' Associations should make certain that the lecturers they employ are not in the habit of making any glaring mistakes, either through slips of the tongue or any other cause. That lecturers want looking after is evidenced by the following extract, taken from the report of a lecture given by a County Council lecturer, and reported in a Midland paper on January 25, 1894:—"The lecturer then gave his lecture. The worker cells average twenty-eight to the square inch, and *the queen cells eighteen to the square inch*" (the italics are mine). "The queen will lay from 2,000 to 3,000 eggs in twenty four hours. Foreign bees, as a rule, are not so profitable as our own country bees, and gather an inferior kind of honey, too." Whether the County Council or the Bee-keepers' Association organise these lectures, it is to my mind the duty of the latter to see that the instruction so given is sound and orthodox.—BEE, *Derby, January* 27, 1894.

BEES IN NORFOLK.

REMOVING BEES FROM ROOF.

[1739.] Not seeing any report in the BRITISH BEE JOURNAL from this county, or, at least, from this part of it, perhaps it would interest the readers of that valuable paper to know that bees are not extinct on the Sandringham estate. Why more are not kept I cannot understand. My apiary consists of only four frame hives, two of which I bought with a skep in the autumn of '92, making three stocks in all. Knowing scarcely anything about bees, and not then taking your paper, I did not trouble much about them beyond standing them in their new home. In January, '93, I commenced taking the BEE JOURNAL, and soon found out that I ought to look and see if the bees were all right. Fancy my surprise, upon lifting the roof of my first hive, to find the wraps all mouldy and the bees dead! The other hive (from which a few bees were flying, and which was already spotted all over as if it had measles of a large type), upon being opened, also showed mouldy wraps, which I removed and replaced with plenty of dry ones, and fed with syrup. The bees from the skep were flying well, so I did not interfere with them.

I had now two stocks of bees, one of which I fed now and then with syrup, and in this way all went well till March, 1893. Hearing one day that the agent (Mr. Beck) was troubled with a last year's swarm of bees over one of his bedroom windows, and that he wanted someone to destroy or take them, I thought it a good chance to fill up my spare hive, so buying a strong pair of leather gloves, and donning the bee-veil I had bought with the bees, off I went, quite proud. To my surprise, I found the quarters the bees had taken up to be under the tiles of a window in the gable end of roof facing Sandringham Church. A very long ladder was procured, and after smoking in at the entrance, I pulled off one or two of the small flat red tiles, to find that the latter were so close together that I could only just insert my gloved hand, but by cutting away

one of the laths I got out large pieces of comb and tied them in four frames. I had brought out a few bees on the pieces of comb, the others were in a corner to which I could only just reach, so taking the hat of the young man who helped me down with the hive, I put the bees in with my hand as a sort of shovel, and then turned them out in front of the hive. I had three journeys with the hat up that long ladder. The hive was left on the lawn next day, and I believe every bee left its old home for the new one. I brought them home next night, and fed them, and they have given me 40 lb. of honey last year, as has also the hive I bought; while from the skep which I drove in July (to get some run honey for show) into a hive I made, putting in two or three frames from my other hives I took 20 lb. My fourth lot are driven bees from a skep belonging to a cottager, who, as he had no swarm from three stocks, decided to take one up. I am quite satisfied with the return given for my trouble, as I sold no honey under 10d. per lb., and a great deal at 1s. My outlay was over £3, but as I have a lot of goods on hand, it is not fair to reckon it all for last year. Besides my own, the village possesses about twelve stocks of bees, all in skeps. I only heard of three persons having swarms. One owner of three stocks had four swarms, but when she went for honey, the bees of every swarm were dead, and nothing left but empty combs. Another had three or four swarms from two stocks, which did well, and the other had one swarm from two stocks, which went straight off. Within a quarter of a mile from me there has been about 60 or 70 acres of clover pasture laid down during the last two years, and in June last year this land looked like snow for a day or two, but our tropical sun soon altered that. Then there are the limes in the park and grounds of Sandring Hall, very little over half a mile away.

And, last of all, the heather on each side of the road from Wolferton station to West Newton—enough to find work for a hundred hives, I should think; but, then, that is a mile off from me, although much nearer the other end of the village. I have written much more than I intended, but should you, Mr. Editor, this too long or not worth printing. I shall not mind; whereas, if you think the other way, I shall be glad I have not wasted this evening. Thanking you again for the help I have received from the BRITISH BEE JOURNAL—F. GREEN, *King's Lynn, Norfolk.*

Queries and Replies.

[943.] *Excessive Swarming.*—As a beginner in bee-keeping, very anxious for information on the following:—I began with one swarm of bees in 1892, last season they swarmed five times though a rack of sections had previously been put on to give the bees more room. I put the second swarm back, keeping out the queen; however, they came off again next day, so I let them have their own way. In the autumn I joined the third and fourth swarms with the virgin hive. Now I would prefer fewer swarms and more honey, and would like to know the best way for an amateur to attain this end. If to destroy queen-cells is any use, where should one look for them, and should that be done before putting on sections?—M. M., *Wigtownshire, January* 22, 1894.

REPLY.—The bees must surely be Carniolans, or a strain given to excessive swarming. Last season was so remarkable as a non-swarming one, it is difficult to account for your exception from the general rule. There is no sure way of preventing swarming, and we can give no better specific against it than ample ventilation and plenty of room early in the season.

[944.] *Transferring from Skep to Frame hive.*—About two years ago I put a 7 in. deep cheese box under a straw skep, making in all 19 in. from floor-board to roof. Now I want to transfer the bees into a frame hive, and propose standing skep on frame hive over quilt. Will you kindly tell me if I am doing right? I don't understand driving bees, and have no time if I did, as I am away at work all day. Will the bees and queen be likely to go down on to full sheets of foundation? They have been in skep for three years. Any information on this point would greatly oblige, as we have no experts in this part of the county to give advice, so I have to be guided by your very valuable paper for all instructions.—G. HEAD, *Ore, Hastings, January* 24, 1894.

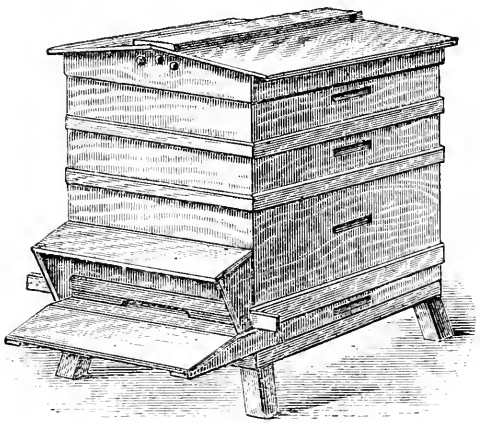
REPLY.—Cut a hole—say 4 in. in diameter—in quilt, and set the skep on it as proposed early in April, and the bees will work down into the frame hive all right. Be sure, however, to give *full* sheets of foundation below, or it is very probable an excess of drone combs would be built in the frames.

THE "W.B.C." HIVE.

So frequently have we been applied to for instructions as to making the above hive, that the number of *Record* in which the particulars appeared some few years ago is now so scarce that we are unable to supply copies. We are therefore induced to reprint below a portion of the article which originally appeared in *Record* for March, 1890, with a few additions and alterations since deemed necessary:—

We do not propose to enter at length into the why and wherefore of our views of what we consider best in a bee-hive—nor are we vain enough to suppose we shall convert

all to our way of thinking—except to say there are few types of hives which have not had a trial in our hands, and when it is seen that we still adhere to an outer case for our hives, we do so from a conviction that for each and every purpose, except, perhaps, one of cost, it is the best. Even in the latter respect it stands well, because, while not the very cheapest, it is a low-priced hive in every sense. We want our body-boxes and surplus chambers to be light and handy, while forming an ample protection to bees and combs from extremes of heat in summer and cold in winter. The hive itself should be always dry and free from damp inside and out. We like a very wide entrance in winter for purposes of ventilation, but cannot approve of a wide entrance to the *outside* (robber bees and biting east winds in spring forming our objection of the latter point). Finally, we think that a colony of bees are maintained in better health when a free current of air is allowed to play about the hive, while the latter is thoroughly protected from the wet and cold of the outside. And in proof of this assertion we state that, while so much is said on all sides about dysentery, we have never had a stock affected by this disease in all our experience.



The "W.B.C." Hive.

To secure the advantages named above, along with other obvious ones, we *must* have an outer case, hence our preference for it. No packing whatever is used in winter between hive and case for warmth, the partially confined space being found sufficient for the purpose, and constituting all the "double walls" needed. The whole hive, outer case and all, is constructed of as light wood as is possible consistent with strength and the necessary firmness and durability, so there is nothing clumsy or heavy about it; indeed, many ordinary single hives are nearly double its weight. Moreover, as already said, it is a cheap hive, and not beyond making by any fair amateur joiner. We only premise that it be constructed of sound timber, owing to the lightness of the material used. Beginning with the *floor board* (Fig. 1), the boards forming it are $\frac{1}{2}$ in. thick, tongued and grooved where joined, and nailed on to stout battens, $2\frac{1}{2}$ in. deep by $1\frac{1}{2}$ in. wide. Between the points at A on sketch it measures 20 in., and the width across at B is $18\frac{7}{8}$ in. The alighting-board projects 7 in. beyond the point A. The form of the entrance, as seen

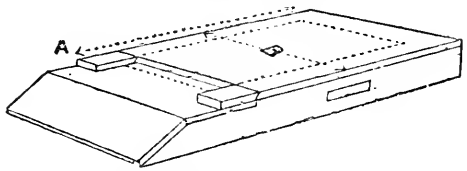


Fig. 1.—Floor-board.

in the sketch, explains itself; it is $15\frac{5}{8}$ in. long by $\frac{1}{2}$ in. high. On the face of the floor-board five bell staples are driven, and when the body-box is set in the space indicated by the dotted lines within the staples, it is in position for the outer case to slip over it. The *outer case*, including roof, is in three parts, the first of which is as seen (Fig. 2). The front and

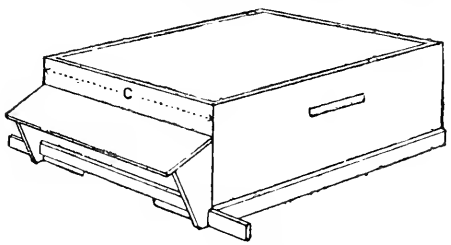


Fig. 2.—Outer Case.

back boards are $18\frac{7}{8}$ in. long, $8\frac{7}{8}$ in. wide, and $\frac{3}{8}$ in. thick. Sides, $19\frac{1}{4} \times 8\frac{7}{8}$ in. of $\frac{1}{2}$ in. stuff. Inside measure, when nailed up, $17\frac{7}{8}$ in. across the front, $19\frac{1}{4}$ in. from front to rear. A plinth, $1\frac{1}{2}$ in. wide, drops $\frac{1}{2}$ in. below the surface of floor-board to carry off wet. Rebated $\frac{1}{2} \times \frac{1}{2}$ in. The slides for entrance are $\frac{1}{2}$ in. wood, 10 in. long by $1\frac{1}{4}$ in. wide, and pass through a slot cut in the outer case along the guide-piece nailed across the front, below porch. The latter extends across the whole front, and is $4\frac{1}{4}$ in. wide, with a groove cut in its bottom edge to carry off drip. The second portion of the outer case is simply a "lift" $6\frac{1}{2}$ in. deep; wood same thickness as lower part, and needs no explanation beyond reference to Fig. 3.

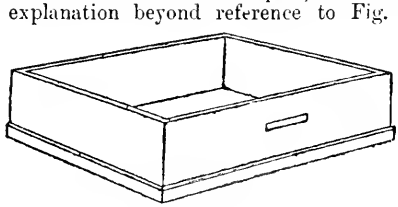


Fig. 3.—Lift.

This lift may be removed after packing for winter to reduce the height of hive, but we leave it on always; it protects the hive when

examined in the early season, and forms a roomy covering for plenty of top packing, &c. Formerly our roofs were 7 in. deep in the clear, to cover a shallow chamber or a crate of sections, but we find it far handier to use a light, shallow roof and a *lift*. The *roof* is very simple, formed with a view to lightness, and being thoroughly rain-proof. The sketch (Fig. 4) will make the main points in its construction plain; for the rest, the front and back pieces are $\frac{3}{8}$ in. thick, $19\frac{3}{4}$ in. long, $3\frac{1}{2}$ in. deep at ends, rising to $5\frac{3}{8}$ in. in the centre or ridge; sides are of $\frac{3}{4}$ in. stuff, $20\frac{1}{8}$ in. long, $3\frac{5}{8}$ in. deep. Along the lower edge of side-pieces a rabbet is cut $\frac{3}{8}$ in. $\times \frac{3}{8}$ in. deep. This allows the roof to slip over the

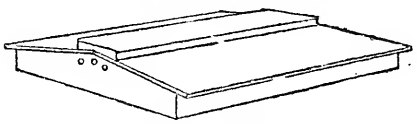


Fig. 4.—Roof.

lower portion of the outer case, and so dispense with a plinth while effectually keeping out the wet. The top of roof is of $\frac{3}{8}$-in. wood, each piece being $23\frac{1}{2}$ in. $\times$ $10\frac{3}{4}$ in., and they meet in the centre, the ridge-piece (of 3 in. $\times$ $\frac{7}{8}$ in. stuff) being cut on the under side to cover the joints as shown, so that no water can possibly get in. Hand-holes in each part, for lifting, complete the outer case, and we need only add that each of the separate parts fit *easily* over the other—no "tightness" anywhere so long as bees cannot enter from outside.

The *body-box* (Fig. 5) is $14\frac{1}{2}$ in. $\times$ 15 in., *inside* measure; holds ten standard frames and two thin slips of wood, $\frac{3}{8}$ in. in width and 17 in. long. The front and back boards are $\frac{3}{8}$ in. thick, $15\frac{1}{4}$ in. long by $8\frac{1}{4}$ in. wide, and

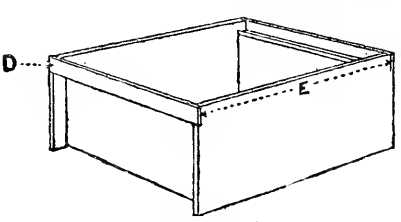


Fig. 5.—Body-box.

slip into grooves in the side-pieces, which latter are $\frac{1}{2}$ in. thick, $17\frac{5}{8}$ in. long, and 9 in. wide, grooved at 1 in. from each end, as stated, and a piece is cut away at the outside of each end to receive the strip of wood D (16 in. $\times$ $1\frac{3}{8}$ in. $\times$ $\frac{1}{4}$ in. *full* thick), which encloses the frame-ends as shown. Prior to nailing on this strip, a piece of wood, $\frac{3}{4}$ in. $\times$ $\frac{3}{4}$ in. and 15 in. long, is secured in place, level with the top edge of front and back boards, along which are nailed the zinc angle-pieces, forming the "metal runners" whereon the frames—fitted with "W.B.C." ends—work. A close-fitting *division-board* may form part of the hive, but, when not in actual use, it is kept in the vacant space in rear, or taken away altogether till wanted. The body-box is shown in sketch without frames to assist in making its construction clear, and we must point out the need for perfect accuracy in measurement between the points which enclose the ends of the frames, at E. It should be just a *shade* over 17 in., so that the standard top-bar fits easy, with very little "play." If this space is badly measured—say $\frac{1}{8}$ in. too long—it upsets the distance between side-bars of frames and the sides of the hive, and causes much annoyance in working.

(*Conclusion next week.*)

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

LEONARD SMITH (Beds).—*Honey and Candy.*—1. As stated, the honey is very handsome in appearance, but it lacks the true honey flavour. We may be able to report further on it later. The candy has been over-boiled; it should not be anything like so hard as sample when properly made, but have a soft, buttery surface when scraped with the finger-nail. We will think out your plan of raising frames, and report next week.

G. MILLS (Newark).—*Dead Bees cast out*—There is nothing in bees sent to indicate the cause of death. No alarm, however, need be felt at the occurrence. There would be no actual "harm in giving candy" now; but if food is plentiful it would do no good, and consequently is unnecessary.

A NOVICE (Newton Abbot). *Clipping Queens.*—The practice of clipping the wings of queens is not supposed or intended to prevent swarming, but to secure the swarm from being lost, the queen's inability to fly causing her to fall to the ground beneath the hive entrance and to be secured by the bee-keeper.

W. H. B. (Gosforth). *Bee-flowers.*—Among the most useful bee-flowers may be named wallflower, borage, mignonette, white arabis, Linnanthes Douglasi, corn-flower (*Centurea cyanus*), phacalia, and sunflower.

Several Letters and Queries are in type and will appear in our next.

Editorial, Notices, &c.

BRISTOL BEE-KEEPERS' ASSOCIATION.

The Bristol and District Bee-keepers' Association held their annual dinner January 25, 1894, at the Crown and Dove, Bridewell-street, Mr. W. H. Butler presiding. There were also present the Rev. J. Polehampton, Messrs. A. C. Polehampton, W. Bryant, J. Harford, Flook, Fenner, G. Wyatt, J. Brown, E. A. S. Cotterell, and a large number of other gentlemen. Letters of apology were received from Mr. T. Dyke, Mr. J. A. Tilney, Mr. J. A. Collins, Mr. T. Withey, and Mr. T. James. Dinner over, the Chairman called upon Mr. James Brown, the Secretary of the Association, to read the fifth annual report, which stated that although no striking incident had occurred during the past season, it might be said that steady progress marked the work of the Association, whilst in some directions fresh life had manifested itself, notably in the Westbury and Frome districts. The total receipts within the last three years doubled themselves, and were for the past year £70. 5s. 5d. The expenditure was £61. 15s. 2d., thus leaving a credit balance in hand of £8. 10s. 3d. The annual show of honey, &c., was held in connection with the Knowle Horticultural Society's show, and the competition was very keen in all classes, honey being sent from almost every county in England, and also from Ireland. Lectures had been given at all the principal horticultural shows, and the apiaries of the members visited. The state of the apiaries pointed to the necessity in very many cases of a more careful study of elementary bee management. But it might be observed that abundant evidence was given of full success attendant upon the practice of forethought, cleanliness, and promptitude. A sale of members' honey had been held with marked success. The Chairman, referring to the report, said they must all admit that it was a very satisfactory one. He was glad to hear that the Association had grown to such an extent, and that their income had increased to £70. He thought a great deal of the success was due to their worthy Secretary. The reports of the various district experts were then read, after which the election of officers was proceeded with. Lady Smyth was unanimously re-elected President, and the following were elected Vice-Presidents :—Mr. A. Baker, Mr. W. H. Butler, Mr. C. E. Colston, M.P., Mr. T. Dyke, Mr. H. M. Gibbs, Sir E. S. Hill, M.P., Mr. E. H. Llewellyn, Mr. E. J. Swann, Mr. E. J. Thatcher, Mr. C. Warner, M.P., and Sir J. D. Weston, M.P. Mr. J. B. Butler was re-elected Treasurer, and Mr. Brown and Mr. E. A. S. Cotterell re-appointed Joint Secretaries.

LINCOLNSHIRE BEE-KEEPERS' ASSOCIATION.

The Quarterly Committee meeting of the above Association was held in the Council Chamber of the Lincolnshire Agricultural Society, Lincoln, on January 19, Gerard J. Young, J.P., in the chair. Letters were read by the Secretary from Lord St. Vincent and Walter Martin, Esq., regretting their inability to be present—both being detained at home by illness. After the minutes of the previous meeting had been passed, Dr. Percy Sharp, of Brant Broughton, was appointed District Secretary for Navenby, and Mr. Taylor and Mr. Marshall Assistant Secretaries respectively for Brigg and Lincoln. The Committee then proceeded to consider the awarding of medals and certificates of merit at the Lincolnshire Show, and it was decided to offer a silver medal for the best 12 lb. bottles of extracted honey, and a silver medal for the best 12 lb. sections ; these medals to be competed for by members of the Association only. After arranging for a supply of *Records* for the different districts requiring them, and passing the annual report, which shows the Association to be in a very flourishing condition, the meeting terminated with the vote of thanks to the Chairman.

TAUNTON AND DISTRICT BEE-KEEPERS' ASSOCIATION.

A special meeting of the above was held at 5, Hammet-street, Col. Lowis in the chair. Rev. S. F. Cumming, Messrs. J. Kidner, Withycombe, J. Buckland, C. Tite, A. Wolfe (Hon. Sec.), and H. Maynard. The principal matter for discussion was the wording of a special label to be used only by members of the Association as a guarantee to the public of the purity of the honey. After some discussion it was decided that all honey sold by members under the Association's label should be guaranteed by the producer for three months after sale. The guarantee will be given in the name of the Taunton Bee-keepers' Association, and any purchaser who finds the honey inferior is requested to immediately communicate with the Hon. Secretary, whose name and address will be printed on every label. A set of rules for the guidance of members who make use of the labels was also drawn up. The objects of thus adopting a distinctive label will be apparent to all who consider that over £62,000 worth of foreign honey was imported from abroad last year ; every ounce of this honey might have been easily produced by the bee-keepers of England, and it is considered that if some method is introduced by which the consumers can ascertain for themselves that the article is of home production, English honey will receive a first consideration at the hands of purchasers. The Hon. Secretary reported that the Rev. S. F. Cumming and Mr. E. Chapman had consented to act as

local hon. secretaries for the Somerton and Taunton districts respectively. It was also resolved that in every district or parish where a local hon. secretary has been appointed, he shall be at liberty to nominate a member as manipulator for the district. The work of the officer shall be to visit the houses of all members in his parish or district who may care to avail themselves of his services at least three times during the season at more or less regular intervals. These visits may be charged against the member to whom the apiary belongs, but such charge may not exceed 2s. 6d.; cottagers, 1s. As one of the principal aims of the bee-keepers' associations throughout the country is to encourage cottagers and small holders to keep bees on the most profitable principles, the idea of appointing an official manipulator is that these members may learn how to manage their bees by actually assisting a skilled bee-keeper when operating, and for this reason all cottage members may claim free visits for the first season. The proceedings terminated with a vote of thanks to the Chairman.

THE NORTHUMBERLAND AND DURHAM BEE-KEEPERS' ASSOCIATION.

The Committee of this Association regret that, owing to pressure of business, Mr. G. Wells could not fulfil his engagement to deliver addresses in Northumberland and Durham last December. Reports from local correspondents showed that his visit was awaited with extraordinary interest, and they therefore renewed their negotiations with him, and now have pleasure in announcing that, having made special arrangements, he will address meetings as follows:—

February 12, 1894, Newcastle, in the Mining Institute, Neville-street, at 7.30 p.m.

February 13, Consett Assembly Rooms, at 6.45 p.m.

February 14, Whittingham schoolroom, at 7.30 p.m.

February 15, *Cambo.

February 16, *Bedlington (Station).

February 17, *Riding Mill.

* These meetings are under the auspices of the Northumberland County Council.

J. N. KIDD, *Hon. Sec.* N. and D.B.K.A.

WEATHER REPORT.

WESTBOURNE, Sussex, Jan., 1894.

Rainfall, 5·37 in.
Heaviest fall, ·92 in. on 22nd
Rain fell on 22 days
Above average, 3·19 in.
Maximum Temperature, 50° on 11th
Minimum Temperature, 12° on 5th
Minimum on Grass, 10° on 5th
Frosty Nights, 14

Sunshine, 80·36 hours
Brightest day, 26th, 6·85
Sunless days, 9
Above average, 8·4
Mean Maximum, 40·7°
Mean Minimum, 30·16°
Mean Temperature, 35·43°
Maximum Barometer, 30·51° on 3rd
Minimum Barometer, 29·28° on 31st

L. B. BIRKETT.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C." (see 1st page of Advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

HIVES FOR "WELLS" SYSTEM.

[1740.] I beg to offer a few remarks regarding the hive referred to on page 196 of BEE JOURNAL for May 18 of last year. The bees put into the hive were two stocks on thick and crookedly-built combs, which could not be placed close to dummy, and, consequently, in a few weeks I had to cut off each side of the dummy large slabs of comb; but since that, so far as I can see, the dummy is not built on or propolised. I find that, owing to the length of the hive (4 ft.), the wood is inclined to warp seriously; but this, of course, could be avoided by nailing strips of wood across. The hive is too long and heavy; moving it without assistance being out of the question. The plan of having the roof in three parts answers well. I shall not make another, at least not yet, although this has suited my purpose admirably this last season. In the super the bees hatched brood out of several very awkward frames and also brood out of three skeps. I made an exit direct from super so that the drones could get clear, and had no trouble with it; but I noticed a good deal of pollen taken in that way. Besides hatching all this brood, they worked out several standard frames of foundation, and stored honey in them. On March 31 I put them in; nine frames in all. By July they covered thirty-eight standard frames, and one skep. I cannot speak comparatively respecting the quantity of honey they gathered; 1893 was my first year, and all my stocks were being worked from skeps and crooked frames of comb on to good wired foundation. The end entrances I eventually closed, but only to open them again in the autumn. I drove the bees from each end towards the middle, clearing twelve combs. Then into each end I turned driven bees with young queens, first inserting dummies to keep them from the original occupants.

Now I have four queens in the hive, and when the spring is well advanced I intend taking out the two queens in the middle (the old ones) and letting the young ones have the run of the hive.—F. F., *Clapham, Feb.* 1.

HOW I GOT ON WITH MY DOUBLE-QUEEN HIVE.

[1741.] About a year ago I described in your pages how I had made up a double-queened stock of bees, I will not say on the "Wells system," or some of your readers will be down on my presumption as a novice. However, as I promised to report on the result, I may say the bees came out in spring much stronger than my single-queen stocks, and when the "gathering season" arrived, the first-named was the only one ready to take full advantage of it. Though the inflow lasted only a short time, I extracted 55 lb. of beautiful honey from it. It was afterwards taken to the moors, along with my other hives, and when brought back, the double-queen lot gave me 65 lb. of heather surplus, with fully 40 lb. of the same left with the bees for winter stores. The best of my single-queen hives only gave me 30 lb. from all sources, and the others less. You will, therefore, not wonder that I have now made up two other double-queen stocks in like manner for the coming season.

I have not gone to the expense of providing double hives, but simply work my ordinary single ones by giving a perforated dummy in centre and placing a queen and bees on each side. I give an entrance front and back with the frames of course placed parallel to same. Like Mr. Wells, I give a set of shallow frames (parted with dummy) over each brood nest, to which the queens have access for breeding. When supering time arrives, I cover carefully with excluder zinc and supply the shallow-frame surplus-chambers with clean combs or sheets of foundation.

I have carefully noticed that the worker bees do not, as a rule, enter the hive at the opposite end to the queen whose progeny they are, though when in the supers they work in common. The fact of one of your correspondents thinking otherwise made me observe very closely, and I am positive in my conclusions.

When packing for winter I do not disturb the standard frames in lower body, but in the shallow-frame brood-chamber I arrange frames of sealed honey over each cluster of bees extending into the lower brood-chamber, and cover up warmly with abundance of porous coverings. I am careful to allow no draught in winter, giving only a 1 in. entrance. All my other stocks are managed much in the same way.—Wm. Barker, *Hutton Rudby.*

EARLY AUTUMN FEEDING.

[1742.] Referring to Mr. Woodley's request for information of the results of early or late feeding in the autumn, I am glad to be able to entirely confirm his views. In my apiary, by far the best results are given by stocks which have received the whole of their winter rations by the end of August. Some years my bees gather about 10 lb. per hive of heather honey in August, and I therefore wait to see whether they gather enough from this source to amply provide for the winter. Were it not for this occasional late honey flow I should feed at the beginning of August instead of at the end. I have float feeders of tin, which hold say 3 lb. each, and if the syrup is given blood warm a good stock will clear the feeder in a night, and I can thus finish a stock off completely in less than a week, even if they have no natural stores. I am more and more of the opinion, however, that bees winter best on natural stores, and, carrying out this theory, I only used about 1 cwt. of sugar last autumn for 100 stocks.—Edward J. Gibbins, *Neath, January* 25.

HIVE ROOFS.

[1743.] The following may be useful to your readers concerning waterproof roofs:—I have three roofs at three different angles. No. 1, a "Cowan," rising $2\frac{3}{8}$ in. in 9 in. No. 2, a gable, rising $3\frac{1}{16}$ in. in 9 in. No. 3, a gable, rising $4\frac{1}{2}$ in. in 9 in.

No. 1, covered with unbleached calico, painted. Some water got through during snow. No. 2, covered with unbleached calico, painted. Very damp. No. 3, covered with old buckram (used many times as a parcel cover), painted, paint showing cracks. Perfectly dry.

So the dryest is the one with the greatest rise, the wettest the one with the least rise.

If I used zinc I should have a flat or nearly flat roof, the zinc edge doubled back flat to make it smooth, and this edge projecting downwards to throw off the water.

The buckram is the stiffened canvas used by dressmakers.—Ned Swain, *Canterbury, January* 29.

ZINC ROOFS NOT THE BEST.—A SUBSTITUTE.

[1744.] I have tried zinc roofs, and soon got tired of them. Perhaps some of the readers of B. B. J. may like to know what I have found a perfect substitute for metal. I give my wood roofs a thick coat of white paint, and while this is wet cover with calico, which I nail under the edges, and at once put another coat of the paint on this, leave about a week to dry, and give a final painting. A roof thus treated is perfectly weather-proof, light, and does not cut the hands.—J. W. Wilson, *Boston, February* 2.

MAKING HIVE-ROOFS WATERPROOF.

[1745.] I am making some light-weight hives, as I anticipate moving my bees more or less this coming season, and I want the roofs nearly flat so as to be more conveniently packed. I intend using wood barely $\frac{1}{4}$-in.

thick, covering it with whole sheets of oil-paper (the oil-paper used in tissue copying-books, you know), and over that canvas, painted. A printer informs me oil-sheets can be got two feet square. I shall put a strip of wood across the boards—on the inside—to keep them from curling under the summer heat. I think it ought to answer, and will let you know result.

I bought a "Cowan" hive with roof covered with painted canvas, and it leaked the first winter. Railway carriage roofs leaked after the drought last summer.—F. F., *Clapham, February* 1.

COVERING FOR HIVE-ROOFS.

[1746.] If your correspondent, "F. McC." (1733, p. 46), had lined the roof of his bee-house with wood there would have been no drip. I have hives covered with zinc that have been in use for years, and they always keep dry. Mine are lapped over the edges and soldered at the corners, no nails being used. "Bee" (1738, p. 47) should not be too hard on "Lecturers' Errors." Perhaps the "errors" referred to were those of the editor of the local paper from which the cutting was taken. I know myself that want of bee-knowledge on the part of newspaper men often makes a sad hash of their reports.—J. R. T., *Stamford, February* 2.

VICIOUS BEES.

AN AWKWARD DROP.

[1747.] The discussion on the subject of keeping vicious bees reminds me of several incidents in my bee-keeping career, which I will relate :—

A few years ago I discovered a swarm of bees in a hollow tree. After getting permission to remove them "if I could," I proceeded, with the help of a companion (who knew nothing about bees), to do so. All went well until we had secured nearly a bucketful of comb and honey, when the bees began to get vicious, as well they might. My companion, who was sitting on a branch above me, holding the bucket while I handed up the combs, received a sting on the hand. In trying to kill the offending bee he lost his balance, and down he came, bucket and all, knocking me off my perch, and both of us "landed," along with our spoils, in the ditch below, which contained nearly a foot deep of black mud !—W. A. Withycombe, *Bridgwater.*

[Our correspondent relates several other "incidents," all of which—though resulting in more or less serious trouble through mismanagement on the part of bee-keepers—would, we think, serve no good purpose in relating. So long as it is a known fact that bees can be kept without inflicting damage or mischief by the exercise of ordinary care, it would only serve to create unnecessary alarm to give prominence to all the accidents and mishaps readers can recall during a lifetime.—Eds.]

AN OLD BEE-KEEPER'S FIRST YEAR WITH FRAME HIVES.

[1748.] From reading B.B.J. I see there is a good deal to be learned even by an old bee-keeper like myself with my thirty-seven years' experience in the straw skep line. I have often had as many as seventeen skeps at one time, and yet, until 1893, I had never even tried a frame-hive. Last year I began with bar-frames and worked four frame-hives and one skep. I put a glass super on the latter, and in it the bees put 23 lb. of honey. Then with my frame-hives I put on a rack of sections, 1st, and took them off on the last of May, selling them for 11s. My whole harvest from frame-hives and skep making me £3. 11s. 4d.

I had one bad job in taking off the glass, and it caused the death of many of my bees. I wish you could tell me of some plan of getting off glasses safely and ridding them of the bees? And you might also say which is the better for bees at this season, syrup or candy; and how to make the latter.—Thos. Harris, *Combe, nr. Woodstock.*

[Bell-glasses should always have a thin board or "adapter" (large enough for the glass to stand on), and this board is removed along with the glass. By setting a super-clearer below the glass before removal, the bees are got out without further trouble. Soft candy is the proper food at this season. For making, refer to Bee Journal for November 26, 1891.—Eds.]

"CARPIN' CREETICS."

[1749.] I'm awfu' muckle obleeged to ye for the picter and explanation of the "W. B. C." hive. I've juist been wantin' that informashun for a lang time. 'Od, but ye're guid at it when ye stert! It's a peety sae muckle space is ta'en up wae thae havers aboot lecterers' errors and sic' like in the Journal; if the cuifs that want tae daet wad only write what wad be helpfu to a buddy like me, some guid wad be dune; but, as far as I am concerned, muckle that they write is doon richt balderdash, no ornamental to the writer, nor yusefu to the unfortinate reader, an' I hope they winna be lang till they get the Yeditors' "snub" some o' them. A guid auld beuk talks aboot the "mote and the beam," and faigs! if they wad tak the preenciple o' that tae hert, we'ed hear nae mair aboot errors. Noo, Misters Yeditors, dinna loss patience wi' me. I'm unco' anxious tae hae a "Wells" hive, and I juist want to speer ye if ye wad be sae guid as tae yoke tae and gees as guid

discreeption and picter o' it as ye've dune o' the "W.B.C." 'Od, but I wad be gled if ye'el da'et! I'm juist fidgen tae hae yin, and I'm ower puir to buy it, sae aiblens next week ye could set yere pow thinkin', and gees a' the perteeclers o't afloof, and I'll promise no' to bodder ye again—weel, no' till the next time.

Thenkin' ye in anteec'patioɴ, — CHEADLE HULME.

MISCELLANEOUS.

[1750.] *Honey Imports.*—I was more than pleased when reading your Editorial on the above to find that the value of imported honey for the year ending December, 1893, was so much less than that of the previous year. This is, indeed, welcome news; and if the sum would only decrease for the next few years in the same proportion, what cause for rejoicing there would be, especially if the sales of the home produce increased in the same ratio.

Government Help for Bee-keepers.— Ireland is, indeed, fortunate in securing such substantial assistance. I know several schoolmasters in England who would be only too glad if the Educational Department would allow them to take bee-keeping as a class or specific subject; for, being bee-keepers themselves, they would take a special delight in imparting their knowledge to their scholars, and no little benefit would thus accrue.

Foreign Honey. — Mr. J. Morgan (1720, p. 35) says "Much ado about nothing." I do not agree with him. How could the advertisers bring their consignment of Sandwich honey before the notice of wholesale buyers if they did not advertise it in the BRITISH BEE JOURNAL or the *Record?* I know of no other journal that would answer their purpose nearly so well. If it were not advertised doubtless it would not have been sold, and so there would have been less foreign honey to be retailed out. Mr. J. Morgan also tells us that if our home product be clean and pure we can gaze upon a foreign advertisement without disturbance to our peace. I beg to differ. My honey is clean, and its purity I can guarantee; but still foreign honey has prevented my obtaining customers more than once. Only last week, when soliciting orders, I was told that my price—1s. per lb. retail—was too high, for they could get honey at Bromsgrove, put up by Crosse & Blackwell, in nice terra-cotta jars, at 7d. per lb. jar. And this was not the first time this honey at Bromsgrove had hindered my sales; so even Mr. Morgan must admit that foreign honey is not altogether an imaginary evil.

Bee Stings.—I can sympathise with "Salix" (1721, p. 36) anent the above, for I myself have suffered likewise. In 1892 I was on two several occasions whilst manipulating stung on the wrist, and in each instance within a few minutes experienced a numbing sensation, my hands, arms, and face began rapidly to swell, lips assumed a blueish colour, eyes a peculiar appearance, and my trachea seemed to contract, for I had a difficulty in breathing. I was also in a profuse perspiration with accompanying chills and felt inclined "to do" faint, but managed to withstand such an effeminate weakness. I then vomited, and soon a very irritant rash broke out from head to foot, producing a sensation none too pleasing nor agreeable. After a few draughts of "Nature's beverage" I felt better, and within three hours from the time I was stung I felt almost my usual self again. I might add that twice before I had one of my eyes completely closed for nearly two days from the effects of a bee "kicking" me upon the cheek, notwithstanding I was wearing a veil at the time she asserted her authority. There was, I found, a small hole in the veil which had escaped my notice when "donning" it. Happy to say that, although I got several stings during last season, no unpleasant results followed with the exception of a very slight swelling. Perhaps I am getting sting-proof. I hope so.

Weather for 1894. What a glorious time for bees and bee-keepers this year will be should the meteorological prognostications prove correct. There was I remember a weather forecast in an early number of the BRITISH BEE JOURNAL last year, and, as near as I can remember, a true one on the whole.—PERCY LEIGH, *Beemount, Bromsgrove.*

AN "OLD SCHOOL" BEE-MAN.

[1751.] Far away, far from the noise and commotion of the city, which may be music to the town-bred man, but which is hateful to those who have passed the earlier portion of their lives in the country, is a steep hill, marked "dangerous to cyclists," especially those who would carry bees on their "bikes." It is no ordinary hill, it is on the old Roman road, therefore straight through the country as a line; present-day surveyors would have made no road that way, they would have wound round the valley, losing a mile at least by so doing. The village children climb it slowly every morning going to school, it is nothing to them. They gather the whinberries which fringe the banks, and the raspberries high—for them—in the hedges. Returning always happier than when going, they run merrily down. They have a mimic battle with the cones which have fallen from the pines, they stay awhile to pluck the buttercups and see the reflection on their dimpled chins. Over a stile then, and through a meadow where grow the finest pink-tipped daisies—very good for daisy-chains — dipping down till they are lost for a little while, they come to the brook—the brook whose winding course I have followed so often. I wish you could see it as plainly as I can! The immense beds of "ragged robin" and purple orchis, blue seams of "forget-me-not" among the rushes —handsful of flowers! Green carpets of

'sphagnum," mind where you tread! Water violet, ladies' mantle leaves, and lotus flowers. Masses of gorse and bramble on the hillside intertangled, so that when the blackberries are ripe the children for miles round come here. Wild roses so thick and repellent in their thorns that you cannot reach the honeysuckle—not so much as you want, for you want it all! Under these briars, brambles, and gorse the earth is honeycombed by rabbits; higher up still the sward is finer than the best-kept lawn; we have left buttercups and daisies far behind, but there are flowers still, wild thyme and pale veronica. Blue butterflies, bluer, I think, than the forget- me-nots in the brook, and tawny "heaths" flit to and fro—they love this spot. So do the hive bees, they will not miss one clover head, neither the wild thyme. In the evening, close to the sward, the sand-martins fly; far below there is a quarry where the stone is prepared for mending the lanes. A hundred feet high—just under the crust of peat and whinberry wires which overhang—are their nests and pink-white eggs—sour grapes to the village boys. What a leap for the young martins just beginning to feel their wings!

As the martins sweep round the hill, they, too, dip behind a wave of the hill, as it were, and here bursting up among brooklime and watercresses, cleaving a way through them for how many thousand years, is the spring.

Very few come so far as the spring. It is closed in by hills, open only to the dome of the sky. The silence, always unbroken, save for a passing cuckoo, the whirr of a "night jar" on the neighbouring hill, or the monotonous drone of a threshing machine, panting down in the valley. Like a child eager to grow up to manhood, the brook—all dimples at first, and sparkle—rushes impetuously into the valley, into the meadow where I left the children passing over. The country children always linger by the brook, they like to find the white pebbles which look so beautiful under the water. "They love to see the fishes dart away and hide in the green flags; they fling daisies and buttercups into the stream to float and catch awhile at the flags, and float again, and pass away, like the friends of our boyhood, out of sight." "The life, as it were, of the meadows seemed to crowd down toward the brook in summer, to reach out and stretch toward the life-giving water. There the buttercups were taller and closer together, nails of gold driven so thickly that the true surface was not visible. Countless rootlets drew up the richness of the earth, like miners in the darkness, throwing their petals of yellow ore broadcast above them. With their fulness of leaves, the hawthorn bushes grow larger, the trees extend farther, and thus, overhung with leaf and branch, and closely set about by grass and plant, the brook disappeared only a little way off, and could not have been known from a mound and hedge. It was lost in the plain of meads—the flowers alone saw its sparkle." Close to the road, nearly at the top of the hill, is the village church, overgrown with ivy and grey lichen. Opposite are the schools, to which the children come. In the churchyard, not far from the children's graves, is a long mound, now overgrown with grass and ling and wild thyme. It marks the spot where lies my old friend, who for eighty years toiled up the hill; who as a child gathered the whinberries; who loved the brook, and cast flowers in it to float away. It is of him I write—not of his childhood, nor of his vigorous manhood—but the last years of his life. He lived in a little cot, built of brick and tiled—a somewhat rambling place, full of outhouses and sheds. Pigs in unsuspected corners, fowls everywhere; pigeons on the gable, ducks on the pool in the lane, wagons and carts—for he was a wheelwright in his latter years—standing about lined with fowl. A large oak, whose trunk seemed gigantic from the amount of timber seasoning against it, stood athwart the doorway. He was proud of his timber, the beautiful curves in it. His sons laboured in the neighbouring woods, felling trees—as he himself had once—and were able to select the best for him. Before the cot, on one side the door, was a monthly rose, which almost hid the geraniums and fuschias in the window. On the other side was an ancient cotoneaster, and at its foot a daphne bush, fragrant in spring. The garden was a long, narrow one, parallel with the road. From the road it was easy to look over the hedge, then glance over the raspberries, and rest your eyes upon twenty-eight round, chubby, hackled skeps! all facing in one long line, backed by a hawthorn hedge. This, then, was the old man's special hobby. When I inquired for him, his good wife would say, "You will find him up the garden, sir. My husband he do love his bees." There I would find him, sitting on the raised bank against the hawthorn hedge, the long line of hives to right and left, each with their breath, as it were, of labouring bees. Hidden from the road, amongst raspberry-canes, are two more hives close beside him, and broad patches—self-sown—of his favourite flower, the columbine. Legions of bees swept over the hawthorn hedge to their favourite flowers. Those outward bound, having no cargo, were light and buoyant; those returning swung heavily in, laden with merchandise of honey and pollen, to their waxen city. Noisy drones came out and stood a long while rubbing their eyes before venturing forth. How seldom are they seen in the fields—whither do they go?

Often the working bees—unable to reach home so heavy their burden—dropped on the raspberry leaves, on the columbine, sometimes upon the old man's jacket and his rugged face. Stooping, he would gently coax them upon his forefinger and land them on the threshold, whey they would stay and fan their wings for very joy. With what joy the pigeons flung themselves from the gable, clapping their

strong wings, white and beautiful, against the clear azure. As they passed, the cocks screamed a note of defiance. As they passed the bees chased them till they were lost to view like the larks above. In mere sport they would also chase the martins and swallows, whose nests were under the overhanging gable, and on the old beams in the adjacent barn. To and fro the starlings went, straight as a line; their nest was a yard under the coping; they could scarcely keep pace with the pressing demands of their young. I wonder whether the mother felt any thrill of joy when the blue eggs were being broken by a tiny bill beneath her? To and fro the whole day, down into the forest of moving grass by the brook, wading among how many thousand, thousand flowers.

The old man watching the bees, knew partly by the colour of the pollen where his little favourites had been. In the spring, when he saw large pellets of the richest gold in their baskets, his mind reverted to the low water meadows, where the brook spread itself abroad and made a marsh, and here the marsh-marigolds flowered—an acre of them, an acre of gold—to be succeeded by ladies'-smock, which the orange-tipped butterflies love. Later on, some of the bees came in like wasps, so smothered in pollen. A picture of a wild lane leading to a wood, grass overgrown, great thickets of briar and bramble on either side, and tall broom fringing it heavy with blossom, passes like the swallow above; we see—so quick is sight—every line and curve and colour of it, perfect at a glance. We see—so quick is thought—every aspect of the lane, the briars, the bracken, sallow with clouds of fluffy seeds softer than down, the deep ditch along which slender red and blue dragonflies wander, and the tall broom, which for beauty of blossom has no rival. As the bee enters, the stamens released, spring, and throw over her a shower of gold dust. With what joy she returns to the hive, taking it to her Queen!

The old man well knew the reddish-brown pollen of the mignonette, culled from cottage gardens. Did the sight of it also bring the scent too, or was it imagination? The perfumed air which came in great waves from the wings of a thousand fanning bees in the warm evenings; the resonance from the vibrations of their wings, so swiftly fanning to be hardly visible, causing a deep, far-reaching under-tone—these were not imagination. The perfume was the ethereal essence, borne in upon their wings, from how many thousand thousand clover tubes? From how many wild thyme flowers? If the sound-wave which travelled so far as the cottage door could have been transferred to some elliptic pendulum, what beautiful curves it would have traced. Except at special seasons, the flowers from whence came the rich odour could not have been named—it was a blending of them all, trefoil and orchis, melilot and avens, bugle, sweet woodruff white clouds of may, mists of anemones, unclouded skies of blue-bells, crimson sunsets of heather. When the clover was at its best, when the crake-crake of the landrail, incessant, and the sharpening of the scythe, intermittent, told the time of the year, then you knew the scent came from the white clover; a little later it was from charlock or wild mustard. In May from broad fields of beans. If warm, when gooseberries were in bloom, it was very strong, as it was, too, when the limes hung their countless flowers. Thus, with bright pictures of scenes remembered and loved, with scent of flowers well known and dear these sixty years, was it any wonder the old man often sat hour by hour watching his bees? Many of his ideas about them were wrong. He had never seen a book on the subject, and could not have read it if he had. Of flowers, such as grew within a radius of ten miles, he knew the common country names; those that had no names—and they were many—still he knew, but could not define them. Of genera and species, so interesting to us, he knew nothing. For more than sixty years, year by year, he had seen and known them, worked amongst them in the woods, swept them down with the scythe and the sickle. Is such knowledge to be lightly esteemed?

(*To be continued.*)

ANTS AND ALCOHOL.

We have it on Sir J. Lubbock's authority that he once fed some ants on food saturated with alcohol. Like human beings they became tipsy. Then the other ants, presumably disgusted with the condition of the topers, picked them up and dropped them into the nearest water.

Echoes from the Hives.

Beemount, February 3.—It has been quite warm to-day, and quite a number of bees were flying at noon. So far this winter they have been seldom confined to their hives; last month scarcely a day passed without bees sporting about. This open weather must, of course, be of great service as enabling them to take wholesome cleansing flights; no fear of blocked entrances. I gave a hasty glance at my stocks to-day to see if any of the quilts had got damp and required changing. Before last autumn, when packing up for winter, I had always used an impervious quilt immediately over the frames, but last year I determined to try one hive with a pervious covering, having heard its praises sung so often. Sorry to say I found this stock far from dry, notwithstanding its contracted entrance, as recommended when pervious quilts are used. The other stocks were much drier. Doubtless much more food will be consumed in the hives than if the winter had been severe.—PERCY LEIGH, *Bromsgrove.*

Queries and Replies.

[945.] *Transferring Bees to Frame-Hives.*—Will you kindly give me your advice on the following:—In August last I bought a couple of swarms of bees which had swarmed in May and June respectively. One had been "hived" in an inverted wooden bucket, and the other into an inverted box. Being a novice, I thought it safer to winter them where they were established. I put the bucket on the top of the frames of a frame-hive, and placed a super-frame round, and packed between super-frame and bucket with quilts, &c., placing roof over all. The box I put above the frames of another hive, and packed round the same. I see through windows at back of hive each lot of bees have half-filled the frames under bucket and box, but neither of the lots have wintered in the frames. 1. When would be the best time to transfer them to the frames? 2. Should I have to transfer any broad comb?—ANTE BELLUM, *Bognor, February* 1.

REPLY.—1. It is more than probable that the bees have wintered in the upper part, and that in each case breeding is now going on there. We advise removing the bucket and box to make quite sure that this supposition is correct; and while these are off examine the combs of the frame-hive, giving full sheets of comb foundation in such frames as are still uncombed, and making out such as are only half filled with half sheets. Then replace the bucket and box as before, and allow the bees to work down into the frame hive as room is required, and as originally intended. 2. It will be far better to let the bees transfer themselves and their brood-nest below than do any cutting out of brood combs from the upper chambers.

[946.] *Painting Stocked Hives.*—Being quite a novice with bees, and having no one to go to who knows any better than myself, I should be extremely obliged if you would answer me in your valuable paper the enclosed questions. There are several bee-keepers in our village, but all of them have until last summer sulphured their bees. I have persuaded two or three of them to work on the humane system, and hope to have the others do likewise. 1. I had a "Wells" hive last season, one side lost its queen, so I took out six frames (leaving in fourteen) and the perforated division board, thus throwing the bees all together. No honey had been extracted, would there be sufficient to keep them? 2. I kept the six frames with the honey in; when and how should I feed it back? 3. Do hives require painting every year? and can it be done with the bees in?—A BEGINNER, *Yorkshire.*

REPLY.—1. All depends on the amount of honey in the frames left behind. If as many as six of the fourteen frames left are fairly well filled, there will be ample food for the bees. 2. If food is needed it will be only necessary to replace a frame in the hive close to the bees. 3. Every second year is usually sufficient. By painting the fronts after the bees have given up flying for the day, and using plenty of "driers," there is no difficulty in painting hives with bees in them.

[947.] *Sections and Section-racks.*—I have twelve stocks of bees of mine own, and I am piloting three young countrymen, and assisting two older ones with theirs; in all eighteen stocks of bees. I am anxious to know which kind of section is the best to adopt. At present we have few supering appliances. There are two bee way and four bee way sections by various makers, section racks with bee-spaces all round and without, &c. My friends are struggling countrymen, and I am not too rich; we do not mind so much what we spend, only we do not want to buy or make the wrong article. Will you help us in deciding?—F. F.

REPLY.—For general marketing purposes no sections are so saleable as the best kind of American-made ones, and most dealers keep these. As for section racks—or crates as you term them—opinions vary much as to which is the best, and we could do more than name our own preference, which is for one in which the sections hang in frames. You would, however, do well to call on one of our London dealers—as you are located close to town—and see the various makes before deciding.

[948.] *Transferring Bees from Skep to Frame Hive.*—I notice that several of your correspondents ask for advice regarding transferring bees from straw skeps to bar-frame hives. But I have not observed that you have suggested in reply a means of effecting the removal which I saw recommended in another paper. The plan was to place the skep upon the frames of comb in a wooden hive, and it was said the bees would run down and take to the combs, and the skeps might eventually be removed. Would you be good enough to tell me if this is a feasible plan for a strong stock; and, if so, when approximately the operation should be performed? I want, if possible, to get honey from them this season, and it occurs to me that by the above method, if it is effectual, the exchange of hives might be made at an earlier date without risk than by driving in the usual way.—ENQUIRER, *Derby.*

REPLY.—We must assume that our correspondent has but recently become a reader of the BEE JOURNAL, otherwise he would know that the method of transferring referred to owes its adoption probably more to its advocacy in our columns than to any other cause. A perusal of last year's index will show this, and from the number for March 16 last we quote the first reference which appears therein as follows:—"The safest and best way for an amateur is to fit the frames of the modern hive with full sheets of foundation, and make an 'adapter'—*i.e.*, a cover for the frame—of

half-inch board, with a four-inch hole in centre Fix this above frame hive, and, when the skep begins to get crowded with bees (say, beginning of May), lift it from the floor-board, and set it on the adapter above the frames, carefully packing the junction with paper to keep in the bees and maintain the warmth. The bees will work down into the frame hive, and eventually use the skep as a super." The ordinary entrance to the skep is closed, and the bees compelled to use the entrance to the frame hive when passing in and out.

[949.] *Queen rearing and securing early drones.* — Would you kindly answer the following queries *re* queen-rearing?—1. If all the frames of uncapped brood and queen be taken away early in April, and a prepared frame of comb containing eggs be taken from the hive we wish to breed from inserted in the queenless hive and feed-bottle put in, will they raise queens of good quality? 2. How many days must elapse before removing the cells into the nuclei prepared for them? 3. Would it stimulate drone-breeding in a hive if drone-comb were inserted in centre of brood-nest, or would contracting entrance and only allowing six or seven frames force them on equally as fast? I wish some friend would give a paper on queen-rearing.—CHAS. HARVEY, *Stoke Prior, Worcestershire.*

REPLY.—1. Yes; provided there are plenty of bees in the stock to which the eggs are given. An hour or two should be allowed to elapse after removal of queen before giving the comb with eggs, in order that the bees may have found out their loss, and have aroused in them the desire to raise a successor. 2. If the comb given contains larvæ as well as eggs, not more than ten days should be allowed before removal of the cells. 3. The insertion of a frame of drone-comb into centre of a strong stock is the best way of securing early drones.

THE "W. B. C." HIVE.

(*Conclusion from p.* 50.)

The *shallow frame-box*, or surplus chamber Fig. 6) is an exact counterpart of body-box

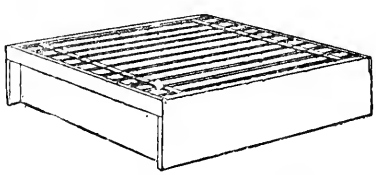


Fig. 6.—Shallow frame-box.

reduced in depth by 3 in., and the frames in it are 5½ in. deep, or 3 in. less than the standard frame. Any number of surplus chambers, or of section-crates, may, of course, be worked at one time by adding a *lift* (Fig. 3) for each tier. The hive, as described, is without legs, and we use the "stand" (Fig. 7).

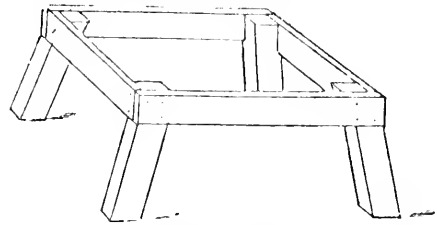


Fig. 7.—Stand.

In these days, when opinions differ so widely as to the use or the uselessness of legs or stands for beehives, we offer our opinion—by no means for the first time—that stands in this country are not only useful but necessary for the well-doing of bees. There may be spots where such things are not so indispensable as in others, but, judging from our own experience, it seems almost impossible to keep bees in health through the winter on floor-boards, close to the damp ground, and within reach of all the slugs, snails, woodlice, and such-like objectionable things as harbour where there is damp and warmth. And we must add to this the inconvenience of stooping to manipulate hives on the ground, and the needless back-aches we who are becoming elderly would have to suffer during a day's work bending and lifting, with heavy weights to handle. Besides, we consider that the more freely the wind blows about a hive all winter the drier and healthier it is kept, and it certainly is more convenient for the bees to alight a foot or so from the ground than close down to it. The old and obsolete alighting board of a few inches wide is now never seen; while few advanced bee-keepers omit giving a full-sized alighting board, of the full width of the hive front, and reaching to, or nearly to, the ground; therefore, all the talk about "heavily-laden bees falling to the ground" is absurd. At the same time, there are many bee-keepers who are perforce compelled to have their hives on legless floor-boards for convenience of moving to the heather, &c. We have felt this need ourselves in years gone by, and our own ideal hive is one without fixed legs; nevertheless we use a stand. It is this stand we here describe for the use and benefit of such readers as care to adopt it. To a casual observer, it is simply four legs and four side-pieces nailed together, and will perhaps suggest a very fragile, shaky affair. Such it is not; it is as firm and almost as rigid as if made of cast iron, and the secret of this firmness is in the peculiar way in which the leg is cut, and the "collar" of wood fitted on to it.

To anyone who understands the use of a bevel the sketch (Fig. 8) of one leg here given explains itself, and any joiner will at once see it; but the amateur who makes his own may require a few words of explanation. So let him take a piece of scantling 3 in. × 2½ in., and cut up into lengths, as Fig. 9, accord-

ing to the number and height of the stands required. He then arranges the legs in pairs and marks them off with the bevel, to give a "splay" of about 2½ in. *from the corners*, so that, when cut, the legs are "splayed" outwards on all sides. The idea will be seen in

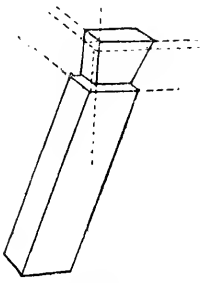


Fig. 8.

Fig. 10.

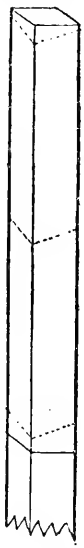


Fig. 9.

Fig. 10, and when the "collar"—made from ⅜-in. stuff, and 2½ in. wide—is nailed on, and the stand completed as in Fig. 7, there is a resisting "set" of the legs from whichever side pressure is used.

It is a good plan to scorch the bottom end of each leg as a preservation against decay.

The "eke" (Fig. 8) may be described as a slice, 3 in. deep, from the lower side of the

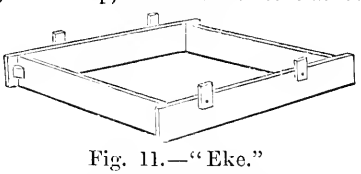


Fig. 11.—"Eke."

body-box (Fig. 5), and, beyond stating that the four slips of wood shown on the upper edge are for keeping it in position when fixed, the sketch explains itself. This "eke" may be used for giving space below combs in winter, and, having served this purpose, by reversing and setting it above frames in early spring, it helps in "tucking in" additional warm wrappings. Finally, when set below the shallow-frame box (Fig. 6) it converts the latter into a full-sized brood-chamber for standard frames.

When fitted up and in use, the hive has a rather more bulky or heavy appearance than it should have, the outer case giving it that look. But, as a matter of fact, it is a light, handy hive, and by no means the unwieldy one some would suppose from the sketch given on p. 49.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

THOS. R. MELLOR (Llandudno), *Bee Stings and Ammonia.*—It is difficult to say what caused the hand to swell on the particular occasion referred to, but "rubbing in" ammonia or any other remedy often leads to the irritation, and, as we think, increases the consequent mischief. We never approve of rubbing the part stung.

J. N. CHEESMAN (Doncaster), *Foreign Competition.*—A perusal of recent numbers of the BEE JOURNAL will show that some Bee Associations have already taken steps for the protection of their members, so far as ensuring that British can be made recognisable as such.

SARUM (Salisbury).—Beyond the probability that the sample contains a good portion of "tree honey," as distinguished from that obtained from flowers, we cannot account for its non-granulation.

WILFRID HARDIE (Bromsgrove), *Foreign Competition.*—Our leader in last week's issue deals fully with the subject of our correspondent's complaint; and if he will kindly refer to footnote to 1730, p. 45, he will see our views regarding the latter portion of his note.

A CONSTANT READER (Pilton).—The cutting referred to appears on p. 45 last week. Sugar sent will do for bee food if guaranteed to be pure cane, not otherwise.

ALF. WOLFE (Taunton).—*Bee Associations and Affiliation with the B.B.-K.A.*—The British Bee-keepers' Association supplies a bound copy of the combined reports of its affiliated Associations each year to the Secretaries thereof. These contain all the information desired by our correspondent, and we would suggest affiliation with the Central body as being most advantageous in many respects to County and District Bee Associations. We should be very pleased to have particulars regarding the labelling of members' honey.

J. E. THOMAS (Cardiff).—We have drawn the attention of the appliance dealer named to the subject of your note, and no doubt he will explain matters satisfactorily.

PERCY LEIGH (Bromsgrove).—Bees are slightly crossed with the Carniolan element. Impossible to tell accurately the age of a dead bee.

Editorial, Notices, &c.

USEFUL HINTS.

WEATHER. — Saving for occasional severe storms of wind and rain there have been few indications that, so far as dates go, it is still winter. Though now in mid-February most days are so sunny and warm, with fruit-buds bursting into leaf, spring-flowers prematurely blooming, and larks carolling overhead, that it brings to mind the time when "the winter is past, the flowers appear upon the earth, the time of the singing of birds has come." But several months must elapse before we are out of the wood; meanwhile it will be well to expect and prepare for hard frost and snow-covered ground ere the beautiful words of King Solomon descriptive of the spring-time are fully realised.

UNSEASONABLE MANIPULATIONS.—In consequence of the warmth and the activity it causes among bees, it is but too probable that the more ardent of our readers will be indulging in anxious and premature longings for a look inside hives to see how breeding is progressing. The exhilarating effects of a warm summer-like day coming in February are equally great on bees and bee-keepers—especially when the latter are beginners, and when it causes a general turn out of the bees—followed by plentiful pollen-gathering with water-troughs eagerly visited by throngs of busy foragers after that indispensable element of brood-rearing—the temptation to begin manipulating the frames is more than some can withstand. It is, however, none the less unwise and injurious to the well-doing of stocks to upset, pull about, and expose combs of tender brood mainly to satisfy curiosity, when the very nature of the work observable from the outside demonstrates so plainly that all is going on well within.

An old hand at bee-work would be dreadfully annoyed if compelled to perform operations which at times the novice is so anxious to be "getting at," experience having taught the former what mischievous effects often follow unseasonable and imprudent manipulations; and the sooner the beginner profits by what the "old-hand" has learned the less dearly will his experience be bought.

In the above observation we desire mainly to enforce the axiom "don't manipulate unnecessarily." But we by no means advise that bees should be left without attention just now, especially when the mildness of the weather for so long a period must have caused a heavy drain on stores. As one consequence of this it would be the height of folly to neglect such examination as will ensure that no stocks are in famine condition. A mere peep beneath quilts will, however, suffice to make this point clear, and, if food be really short, nothing at this season equals a cake of soft candy placed just above the thickest portion of the cluster.

SPRING CONDITION AND QUEENLESSNESS.—The condition of bees well prepared for winter in the early autumn of last year should now be fairly satisfactory, the frequent flights afforded by the mild weather ensuring more or less immunity from that spring-plague dysentery, and we are pleased to learn that many stocks are in unusually forward condition. Some will, no doubt, be found queenless, and in this case it is advisable to defer uniting until later on, when possibly some other lot, weak and wanting bees, but having a queen, may be discovered. If this occurs the joining-up will be mutually advantageous. Queenlessness often readily indicates itself by the lassitude and inactivity of the bees. When this becomes obvious no time should be lost in making sure of the fact by examination. In the same way, hives from which no bees are seen to issue, while contiguous stocks are busy, should be immediately examined, so that if the inmates are defunct the entrance may be closed pending an opportunity of inquiring into the cause of death. Instances have occurred when much mischief has been wrought by neglecting this precaution, the bee-keeper discovering, too late, that a stock has perished through foul-brood, and the contents of the diseased combs carried off by healthy colonies.

SPRING PREPARATION. — The busy time for bee-keepers now so rapidly approaches that plans for the coming season must be thought out or perfected,

and, in considering these matters, the words of a well-known American authority are full of import. When asked how many colonies of bees it was advisable to keep to ensure the best return, he replied, "as few as possible." Meaning thereby, that the fewer stocks the bee-keeper had to manage, the better he would be likely to manage them. In other words, a dozen good stocks, well cared for, will yield more profit than three times that number of poor ones badly looked after. Then there are the honey sources of the district in which the bee-keeper is located to be considered. If the main supply is gathered from blossoms which are available in April and May, it is idle to expect any profit from stocks not fit for surplus storing till June! Nor is it any wiser to worry about stimulating bees and queens in order to produce full colonies a month before the inflow of the district begins. The careful bee-keeper will therefore so regulate his spring preparation as to make them fit in with his work and that of his bees, always being a day in advance rather than an hour too late in all he does. There should be plenty of jobs with which the most energetic of beginners may occupy himself during the next couple of months, and if he will let off his superfluous steam in working and preparing his appliances, the live stock may very advantageously be allowed to continue working on in peaceful prosperity, undisturbed by their often too-zealous owners.

FOREIGN HONEY.—So much space in our columns has been devoted to this subject of late, that little wonder need be felt at its having become somewhat tiresome to the majority of readers. We also expressed our own opinion on p. 45 of B. J. for February 1, that enough had been said, intending to close the discussion in that issue. Possibly this intention on our part was not made sufficiently prominent, for, so continuously did letters referring to "foreign honey" and "foreign competition" come to hand, that we decided to insert, for a week or so longer, any having a direct bearing on the salient points of the case. Alas! for Editorial resolves, "the cry is still they come," and, if we devoted space to all the "copy" sent for publication, referring directly or indirectly on the foreign honey question, not only would there be little room left for aught else, but our pages would be anything but instructive or satisfactory reading. Moreover, the bulk of the correspondence sent for publication contains so much of rather offensive personality that we must decline to publish it.

A few letters, which we insert in this issue, belong to the class referred to as having a direct bearing on the case, and are also interesting to the general reader, notably that of Mr. Jordan (1753 p. 64). We shall probably make a selection from the remaining correspondence referring to the subject, and deal with it next week.

BRITISH BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

We would remind readers that the annual meeting of the B.B.K.A. will be held at 105, Jermyn-street, W., on Wednesday next, the 24th inst., at 3.30, when it is hoped that all members who can make it convenient will attend, as important business will be transacted. The usual quarterly *conversazione* will take place, on the conclusion of the general meeting, at 6.30 p.m.

SOUTH OF SCOTLAND BEE-KEEPERS' ASSOCIATION.

The annual general meeting of this Association was held in the offices of Messrs. T. Kennedy & Co., seedsmen, Dumfries, on the evening of Saturday, January 27, Mr. T. Kennedy Newbigging, President, in the chair. After the minutes of last meeting had been read and approved, the Secretary, Mr. Wilson, Acrehead, read a statement of the financial position of the society. He regretted that the show of 1893 had been conducted at a loss to the society from a commercial point of view, but as all the members were, no doubt, aware, it was, as a show, the best that had ever been held in Scotland, and he trusted that next season he would not only be able to chronicle as good a show, but one that had paid its way. From this cause the finances had been considerably crippled; still, they had not only been able to pay their way, but had a small balance in hand. The following office-bearers were re-elected:—Patrons: Wellwood H. Maxwell, Esq., George Watson, Esq., Leonard Pilkington, Esq., A. Johnstone-Douglas, Esq., William Younger, Esq., and Captain C. Yorstoun. Honorary Presidents: Sir Mark J. Stewart, Bart., M.P.; Sir Thomas D. Gibson-Carmichael, Bart.; and W. J. Maxwell,

Esq., M.P. President : Thos. Kennedy Newbigging, Esq. Vice-President : James R. W. Wallace, Esq. Treasurer : Councillor Charles Palmer. Secretary : William Wilson. Committee : Messrs. John McCreath, John Ross, James Kerr, Sidney Roebuck, George Crichton, Robert Service, jun., John Currie, Alex. Chalmers, and William Jardine. And the Committee having been instructed to make arrangements for a Honey Show, the meeting terminated with a vote of thanks to the Chairman.

NORTHANTS BEE-KEEPERS' ASSOCIATION.

The annual meeting of the above Association was held on Saturday, the 3rd inst., in All Saints' School, Northampton. Mr. H. Collins presided over a fair attendance. Letters of regret for non-attendance were read from several members, including Mr. A. L. Y. Morley. The report for the past year was read by the Secretary as follows :—In presenting the eleventh annual report, your Committee congratulate you on the prosperous condition of the Association, financially speaking. There is a balance of £11. 13s. 9d. in hand, besides several pounds of the grant which is now being spent in providing additional lectures. Disbursements of the County Council grant have already provided lectures at Wappenham, Greensnorton, Brampton, Holcot, and Overstone. The bee-tent was erected at Kettering, West Haddon, Delapré, Weedon, Long Buckby, and Brackley. The lectures, besides being well attended, have aroused an interest in bee-keeping, and proved beneficial to present members of the Association and others. After referring to the past honey season and the success of the Annual Show the report goes on to say :—Your Committee take this opportunity of stating that arrangements can be at once made for free lectures and during the summer months for out-door demonstrations in the bee-tent at flower-shows, &c., or in the apiaries of members and others interested in bee-keeping. The report as read was adopted, and the accounts for the year 1893 passed. The election of officers for the ensuing year then took place :—President, Mr. H. Labouchere, M.P. ; Hon. Sec., Mr. R. Hefford ; Hon. Treasurer, Mr. Atkins ; Hon. Auditor, Mr. J. Francis ; Committee, the Rev. J. Phillips, Mr. A. L. Y. Morley, Mr. J. Francis, Mr. Manning, Mr. and Mrs. Ball, Mr. H. Collins, Mr. C. Cox, Mr. J. Phillips, Mr. O. Orland, Mr. Adams, and Mr. J. Cox. It was decided to increase the prizes at the Annual Show, and also reduce the entry fees, and offer prizes for honey at West Haddon Flower Show and at Wellingborough Chrysanthemum Show. The meeting concluded with the customary vote of thanks.

NOTTS BEE-KEEPERS' ASSOCIATION.

LECTURES ON BEE-KEEPING.

The Notts County Council have arranged with the N.B.K.A. for lectures on bee-keeping to take place as under :—

February 14, Retford, Temperance Hall, 7.30.

February 15, Newark, Old Savings Bank, 7.30.

February 16, Stapleford, Board School, 7.30.

February 17, Nottingham, People's Hall, 6.30.

February 20, Epperstone, National School, 7.0.

February 21, Kirkby, National School, 7.30.

February 27, Granby, National School, 7.0.

February 28, Ruddington, National School, 7.30.

March 1, Clifton, National School, 7.0.

The first four lectures of the series will be delivered by Mr. J. H. Howard ; those at Epperstone and Kirkby by Mr. A. G. Pugh ; at Granby and Ruddington by Mr. J. H. Raven ; and the final one, at Clifton, by Mr. P. Scattergood, jun.

In addition to the above, lectures have already been given at Bleasby and at Strelley by Mr. G. Hayes and Mr. P. Scattergood, jun.

The annual meeting of the Association will be held at the People's Hall, Nottingham, on Saturday, the 17th inst., at three o'clock, Viscount St. Vincent in the chair.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C." (see 1st page of Advertisements).*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1752.] The weather continues open and mild, though boisterous winds prevail, making the work of water-bearing hard work for the little bees ; in fact, many are lost in the attempt to procure a supply. The mild weather gives continual chances of flight ; on some days there is a general turn-out, and I have no doubt that the high temperature (for the season) will induce early breeding, and

an enlarged brood-nest means more food consumed, therefore, where any doubt exists as to a sufficiency of food to meet the increased demands of an increasing family, give a cake of candy or a frame of honey.

Straw Skeps.—I notice Mr. Rowell (1,732) mentions the light weight of skeps. I have also noticed the same in some instances, and in others the reverse. The reason in those under my own observation was simply the size of the skep that made all the difference between a heavy and a light stock at taking time, a hive of small dimensions cannot prove a weighty affair when it is full, but a large skep that will hold, say, 3 pecks dry measure will be a good lump to handle, especially between the lights of a summer's evening, when you are getting benighted in your driving, and the bees just between a fight and a run. I always try to impress the desirability of using large hives if good takes and heavy pots of honey are wanted with a good cake of wax thrown in.

Hive roofs and their covering seems to be occupying the attention of bee-keepers. Possibly the late rains may accentuate the fact that wood roofs, except they are perfectly sound and free from knots, are not either rain or damp-proof, and this fact induces bee-keepers to look for something impervious to wet. I myself consider zinc as a good durable substance to use as a cover to the leaky wood roof. I remember the Rev. W. E. Burkitt, of Buttermere, advocating Willesden ply-card as a durable cover for hives—I should suppose to be laid on a wood roof. The Company also makes a four-ply roofing at 9d. per yard; but I cannot say if that is per square yard or per yard run; also the firm advertises a rot-proof canvas which I should think would be a good material to cover wood roofs with. I have tried and discarded painted unbleached calico; it only lasts a year or two. Thin sheet zinc painted a light stone colour will prove the cheapest in a few years' wear.

The number of *Gleanings* for January 15 has an interesting symposium of bee-keepers, professors, and fruit-growers on the "Fertilisation of Fruit Blossoms by Bees," and an extended and carefully conducted series of experiments conclusively prove that insect fertilisation increases the fruit crop by a very large percentage—in fact, it is essential to the fruit-grower that the honey-bee should be in close proximity to the orchard. The negative side of the question is taken by Mr. W. S. Fultz, of Muscatine, Indiana, U.S.A. This writer asks how the wild fruit-bloom, the nuts and walnuts, were fertilised before the introduction of the honey-bee. I do not think that any one who has observed the course Nature has provided for the fertilisation of the hazel-nut or the walnut ever asserted that the bee or any other insect aided in the act or process of rendering the blossoms fertile. In both these instances the wind is the motive power that shakes the catkins, which in their turn supply innumerable grains of pollen which fall on the stigmas of the flowers and fertilise the same; the same of the walnut. Here in these two plants we notice the prodigality of nature in the production of pollen grains, and also the succession of catkins growing to maturity. Not all at once is this wealth of life-giving germs scattered to the winds, but day after day the wind, blowing from different points of the compass, scatters it in all directions, and thus it reaches the blossoms that require its aid to develop into fruition. The practical fruit-grower, a Mr. Berry, whose orchard is 440 acres in extent, sums up the matter in a nutshell; he asserts that no bees, no fruit! Two years he put netting over some of the branches of his fruit-trees, and, while they blossomed all right, produced no fruit, yet where limbs were uncovered there was plenty of fruit. This proves that bees are an important factor in augmenting the fruit crop.

This leads us on to a consideration of the fact that in a few weeks we shall be in the time of fruit blossom. Now is the opportunity for bee-keepers who have their apiaries in proximity to orchards to ventilate the question of the utility of the honey-bee to the fruit-grower, and to see that his bees are not poisoned wholesale by the spraying of the fruit-trees while in bloom with solutions of Paris green or London purple. This spraying, if necessary, can be done to the benefit of the fruit-grower and without injury to the bee-keeper if the interest of both parties are considered. Only get the grower of fruit to take hold of the tangible fact that your bees are indispenable to a productive crop of fruit and you touch him in a vulnerable point, and depend upon it, friends, he will study the interest of the "goose that lays the golden egg."
—W. Woodley, *Beedon, Newbury.*

PRICE OF BRITISH HONEY v. FOREIGN.

[1753.] Having been confined indoors for five or six weeks by serious illness, it was with great pleasure that I went out in the garden for a few minutes on Sunday last. It was a beautiful day, and the bees from my ten hives were out in large numbers, as busy as bees, in a fine row of crocus in full bloom. The season bids fair to be an early one, as the apricots and Jargonelle pears are already showing the bloom buds, of which there is abundance again.

I have just been reading about "Foreign Honey" (No. 1750, p. 55). I can't agree with the writer at all on this subject. In the first place, I don't like boycotting anything, and this seems to be the only remedy suggested. Secondly, I consider Mr. Leigh asks too high a price for his honey, especially in a season like 1893, as I think it will pay the British bee-keeper to produce honey at half that price

in a good season. To prove this, from my eight hives (spring count) I took about 480 lb. of honey, about 150 lb. being in sections, the rest extracted. I sold 10 doz. sections at 6s. 6d. per doz., and 256 lb. extracted honey at 6d. per lb. (purchaser finding vessels). The remainder I retailed, sections at 9d. each, extracted 8d. per lb. Now this makes the gross receipts from eight hives to be £13. 4s. 10d. Take from this £2 for sections, foundation, &c., and allowing 2s. each hive for depreciation, leaves £10. 8s. 10d. as the reward of the bee-keeper for his labour, &c. Of course, we are not always going to get seasons like the last, but I think it is a great mistake to ask such high prices, as this gives the foreigner just the opening he is looking for.—G. JORDAN, *Steeple Aston, Oxon., February* 9.

FOREIGN COMPETITION.

[1754.] The discussion which is going on in your columns concerning foreign honey and foreign competition serves at any rate to enliven us in our dull season, which will soon terminate, as the activity of my bees to-day indicates.

I should have not ventured to write you again on this subject did I not think I might possibly mollify those of your correspondents who have indulged in a considerable amount of wrathful indignation over a certain advertisement which appeared in your pages. I can freely give credit to them for exhibiting patriotic sentiment, but sentiment goes for very little in business life. Were our friends who have the interests of the cottager at heart, to turn to the advertising pages of journals supported by the drug trade, they would find much to interest them respecting foreign honey, and they would also learn that foreign competition, or more accurately the free importation of foreign honey, is the normal condition of things. The facts certainly do not point in the direction indicated by your correspondents, that foreign competition will ruin home trade. Competition among ourselves has far more to do with the fall of prices than any evil inflicted upon us by foreigners deluging our markets with their low-priced goods. Formerly, a bee-keeper with his few hives could readily dispose of his honey privately, and very little indeed of the genuine article found its way into the shops; now it may be seen in our large towns in every grocer's shop that does what is called a high-class family trade. This is, of course, the natural result of what I may call missionary effort, undertaken by those who believe in bee-keeping as a means of bettering the condition of the agricultural labourer. That the increasing production of honey at home year after year will reduce prices is to be expected, and a few good seasons in succession might lead to a crisis that would crush out the small producers, and leave those that can count their hives of bees by the score in full possession of the markets. The uncertainty of our seasons is perhaps the chief difficulty we have to contend with as regards a large honey production, and if it were not so the business would, in my opinion, have long ago concentrated itself into the hands of specialists; but, even as the case now stands, the tendency is in that direction. The outlook for the "*bonâ fide* cottager" is not a particularly bright one, but, notwithstanding all that has been said of the advantages he might obtain by bee-keeping, from what I see around me there are very few of this class who manifest any interest in bee-keeping whatever. That the bees might easily be made to divide the honour of paying the rent with the pig is admitted, but among agricultural labourers there are few who care to verify this experimentally. In this locality there are a number of small proprietors—men with "three acres and a cow"—who, as I should suppose, were peculiarly well fitted to be bee-keepers, but, as a matter of fact, their tastes do not lie in that direction. They have a strong belief that bee-keeping is a mysterious art not to be mastered by them, and I must admit that the paraphernalia of the modern bee-keeper gives considerable colour to that opinion.

The large diminution in the honey imported into this country last year compared with the year previous is due to the unprofitableness of the trade. In 1892 we were considerably overstocked, as I learn from a gentleman of my acquaintance who handled no mean aliquot part of the honey imported from Chili within the last two or three years.—A. DONBAVAND, *Whitby Heath, Chester, February* 5, 1894.

"HONEY RINGS" AND HIVE ROOFS.

[1755.]—The reference in your Editorial, February 1 (p. 41), anent the formation of a "ring formed for the purpose of buying up cottagers' honey" has caused me to make some inquiry in the corner of Worcestershire in which your correspondent resides, and knowing most of the bee-keepers in the district I have, during the past week, made it my business to ask some if they have heard or know of the parties who compose the "ring" referred to, all confessing they have not heard of it.

Your notes dealing with the subject should certainly convince these so-called dealers of the error they have fallen into—that is, if the "ring" exists at all. Honey, I know, in this district is looked upon as a luxury, and at 1s. per lb., I know for a fact, is more than the poorer class care or can afford to pay. I believe if honey was in ½-lb. jars instead of the 1-lb. jar so frequently seen, or, in other words, the ½-lb. jar used more, it would give the class we wish to see use it more a far better chance to buy it.

I myself have lost customers through not

having it in small quantities ; but if 1894 is as favourable with me as was 1893, my intention is to have my honey put into more ½-lb. jars, for I find poor people will more readily buy it. In Mr. W. Woodley's "Notes by the Way" the timely advice he so freely gives in your columns has endeared him to quite a host of bee-keepers, "old school" and "new." The two words he uses at the end of his first note, "Don't procrastinate," fit in at all times ; but just now they seem especially valuable. At all events they caused me to be "up and doing."

Referring to the covering for hive roofs, and the number of suggestions thrown out, may I add my mite ? I always make my hives with gable roofs of ⅝-in. boards, with a rise of 4½ in. in 9 in., and then cover with ordinary roofing felt ; after tacking felt down I give it two or three coats of "Hill & Smith's black varnish." I have put two coats on in an evening. Some will, perhaps, prefer paint, but I have not found any bad results from the varnish, and I have not found any leakage.—WILFRED HARDIE, *Bromsgrove, February* 10.

AMONG THE BEES.

[1756.] *W.B.C. Ends.* — Well, Messrs. Editors, I had just written my ideas upon this matter when I saw that you had put a "stopper" upon the correspondence. I hope, however, you won't mind me just giving my vote without explanations ; if so, it is decidedly in favour of the W.B.C., as being the best end that has yet been invented, and will take a lot of scheming before any improvement can be made in it.

Hive Roofs.—Mr. Ned. Swain (1743, p. 53) omitted one little, though very important, particular in preparing his roofs. It was not the less acute angle that caused the leakage, but the manner of preparing the roof before covering with calico. In my letter upon the subject I advised preparing the roofs as they do, or perhaps did, the roof of railway carriages, of course substituting lighter materials. A hive roof is much smaller than that of a railway carriage, and so requires somewhat different materials. We know that zinc is perfectly impervious to wet, so will very effectually keep a hive dry. My zinc roofs do so perfectly, yet I dislike them for bee-hives for the reasons before enumerated. Now, I have other roofs perfectly flat, that are covered in the way I recommend, and the hives are equally as dry as those with zinc covers, although the zinc roofs are built at an angle, and the others "as flat as a pancake" (excuse the simile—it was Shrove Tuesday last week). Just see how handy it is to have flat roofs in an apiary. Why, it doesn't matter which way you turn, there is a table near to put oddments on ready to hand at once. I'm digressing. Now, a zinc or other metal roof must be heavier than with my plan. I have just been down in the apiary, removed a roof made six years ago, and weighed it ; its weight is 4 lb. 3oz. This roof has stood through all sorts of weather for six years, never having been removed from out the apiary, and only had one coat of paint since—that was this last autumn. Those who advocate metal roofs, just weigh yours, and see the difference, and then inquire of yourself what advantage it is to have metal to keep out the wet when a very much lighter and cheaper material will keep the hive equally as dry and last as long. When I say cheaper, I don't mean cheaper than old biscuit or other tins metamorphosed into hive roofs. I don't like the look of such makeshift arrangements in my apiary, and wouldn't have them there if all other descriptions of roofs cost double what they do.

Often in the summer, and sometimes winter time, I simply remove one of these light flat roofs, turn it up on edge, and sit down comfortably ; in fact, I sometimes pass an hour or so on rest-days sitting thus, while enjoying the weed and watching the bees. Some, perhaps, will say that a light roof is more liable to be blown from off the hive by the wind than a heavy one. This is so, no doubt, if the heavy one weighs, say, half-a-hundredweight. I never remember one of my flat, light roofs being blown off, yet many others, weighing two or three times as much, have been.

The manner of preparing these roofs is almost identical with Mr. J. W. Wilson's plan (1744, p. 53). I take good white lead paint, and thicken it to the consistency of cream with whiting well worked in ; then I give a thick coat of this to the roof, and when well covered with this I tightly stretch a piece of unbleached washed calico over all and fix the edges tightly under the edges of the roof with thin strips of wood nailed on. Then well rub the calico into the paint and whiting mixture, and stand aside for two or three days until dry. After, I give the calico three coats of paint. That roof, if well done, will not require any attention for five years, and not a particle of snow or rain will ever penetrate it. This covering is so neat and looks so nice and clean if painted white. It is as light and serviceable a covering as can possibly be made.

Some of you "metal-roofers," just try one or two hives thus prepared, and see what you think of them. I have one such roof, but built at an acute angle, in my apiary, perfectly watertight, that was so covered either nine or ten years ago and has not had an atom of paint on it since. I often wish that I had more flat roofs in my apiary, and would alter the present ones to that form, but it means too big an item with so many hives.

I don't think I should, as Mr. Ned Swain has done, use buckram for the covering, as that being a very fine and flimsy material, stiffened with a very considerable quantity of some sort of mucilage, does, upon the slightest exposure to damp, absorb so much moisture as

to become quite soft and pappy ; also, if this were used, being already so fully charged with some other substance, it would, no doubt, refuse to absorb the paint, and so lose half its properties of withstanding the wet for so long a time as common undressed calico does, when saturated with the paint.—W. B. WEBSTER.

MOVING BEES—FOREIGN HONEY.

[1757.] I had occasion to move my bees (four hives) to another garden about 400 yards away, so I watched the weather carefully, and moved them late one afternoon, when I fancied the severe frost had left us ; the bees had been confined just a fortnight, and the day I transferred them was much milder. I was most fortunate, for the next day was very mild, and out they all came. On visiting the old spot, I was pleased to find none, all having taken the fresh bearings. This seems to show that a fortnight is long enough confinement previous to removal.

I have now taken your journal for over four years, and I am much pleased in having received a vast amount of useful information. One thing I'm sorry to say I've learnt from it that we bee-keepers as a class will probably be set down as the most narrow-minded lot on the wide earth by any outsider who chances to read the correspondence *re* the Foreign Honey Advertisement. I was heartily pleased with your capital article in last week's JOURNAL on the question. Wishing the JOURNAL continued success, and all a prosperous 1894,—E. H. M., *Hereford, February* 5.

THE NEW WIDE "W.B.C." END.

[1758.] Very pleased to see this on the market. I feel sure this end will prove a boon to bee-keepers working for extracted honey. The eight ends exactly fit the "W.B.C." extracting super, and the nine ends will work beautifully in "Meadows' X. L." and many other hives the inside measure of which is 14½ in. by 17 in., there being an allowance of ⅛ in. for ease in working.—W. G. KIGHT, *Swindon, Wilts, February* 3.

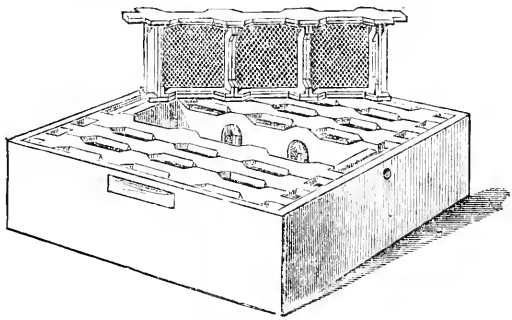
THE "WELLS" DUMMY.

[1759.] In taking a peep into my three "Wells" hives, I am pleased to notice in each case the bees are clustering on the dummies in true "Wells" fashion. I hope to work five of these hives this season. I hope we may have another fine season this year, and a prosperous one.—W. G. K.

THE "W.B.C." SECTION RACK.

[1760.] Seeing in this week's JOURNAL your article on "W.B.C." hive is headed "conclusion," I would beg to remind you that the "W.B.C." section-crate has not been described, which I hope you will yet do, as in reply to (947, p. 58) *re* section-racks, your own preference as stated is for one in which the sections hang in frames. I feel like "Cheadle Hulme" (1749, p. 54) that subjects such as this are a great deal more interesting to readers than "lecturers' errors," and such like.—JOHN BROWN, *Perth, February* 9.

[We fear to tread on dangerous ground, and in describing the section-crate referred to for the purpose of enabling amateur hive-makers to make it at home, we should dread leading them towards failure. As a matter of fact, the frames of the "W.B.C." section-crate require to be so accurate in their *inside* measurement — to work satisfactorily — that only really good hive manufacturers can turn them out to please us. We gladly insert a cut



of the "W.B.C." section-crate to show what it is like, but for this reason do not care to advise amateurs to try their hands at making it, at all events without a good pattern to go by, because unless the sections fit well, and yet drop out easily when the wedge is removed, half the advantages of hanging-frame for sections are lost.—EDS.]

Echoes from the Hives.

Honey Cott, Weston, Leamington, February 6.—Very nice pleasant weather for bees now, and has been some days. Last week and yesterday they were out as though going to swarm (mine never do, though, at this time of the year, other people's to the contrary, notwithstanding). The commotion and excitement were great, also they were making a great rush for water. I set a hyacinth out on the flower garden, and sometimes there are half-a-dozen bees working on it at once ; the snowdrops, too, come in for a good share of attention, and just a few crocuses that had opened out rather earlier than usual. I saw bees on the "go" nearly half a mile away, although at present there is very little pollen about.—JOHN WALTON.

Morton, Gainsboro', February 5.—Bees are almost too forward here ; had a grand fly

Saturday and yesterday. "Wells" hive to the front; pollen going in in plenty; nearly a month sooner than last year.—F. J. CRIBB

Aylesford, Kent, February 8.—I am glad to say all my bees appear to be very strong and healthy, and haven't they sported in the crocus-blooms to-day! The corks in the water-trough have been nearly covered with bees, showing that breeding is going on within the hives.—G. WELLS.

Queries and Replies.

[950.] *Granulation of Honey — Hard Pollen in Combs.*—1. I am occasionally asked the cause of honey becoming candied, and I have to confess my ignorance on the point. Can you tell me how to reply? 2. Also whether bees can remove last year's pollen from the comb? I have got about six combs half full of it, and I do not know whether to melt them down or give them to the bees for wax. — E. JOHNSON, *Kidderminster, February* 8.

REPLY.—1. Stated simply, the chemical composition of honey is saccharine matter and water in certain proportions, with a small addition of an essential oil, called formic acid. The saccharine matter consists of cane-sugar, and what is known as grape-sugar. If the honey contains only sufficient water to hold these sugars in solution, and is lowered in temperature, the excess of sugar will be slowly deposited. In other words, the honey becomes granulated and solid. It is, however, easily re-liquefied by the application of moist heat. 2. If the pollen has become solid and hard, it is useless to the bees, and such combs as contain it are best destroyed or melted down for wax.

[951.] *Transferring to "Wells" Hive.*—1. I am much interested in the correspondence about the "Wells" hive in the BRITISH BEE JOURNAL, and very anxious for information on the following, as I wish to experiment with two of my colonies, now standing side by side, in bar-frame hives. I want to transfer them into a "Wells" hive. Would this be practicable for this year's honey flow? 2. About what date would be most suitable for me to move them into their new, quarters? Or, 3. Should I wait for swarms? 4. In clipping queens, would there not be risk in losing the queen when she came out for an airing? 5. Concerning that "something like an early swarm," which issued on January 11, 1894 (No. 1731, p. 45), would not the stock from which it came be left queenless?—D. LOGAN, *Beechwood, February* 5.

REPLY.—1 and 2. If the two stocks are at present in fairly good condition, there is no reason for not hoping for the best results this season if weather is favourable. If the "Wells" hive can be so arranged that new entrances will occupy the same positions as the present ones, there should be little or no confusion consequent on the transfer, which may be made about end of March in fine weather. 3. The above course is preferable to waiting for swarms. 4. Clipping the wings of queens is supposed to prevent swarms from decamping; no account need be taken of queens coming out "for an airing." 5. As we look upon the swarm (?) referred to as an altogether unnatural one, it is most likely that few, if any, bees would be left in the hive from which it issued.

[952.] *Framing Perforated "Wells Dummies."*—As I am making new hives for own use, I should be glad to know (1) why it is considered wrong to *frame* perforated wooden dummies in double-queened hives, after the manner of a school slate, providing the frame projects only $\frac{1}{4}$ in. each side? Also (2) whether I violate any principle in making my frames (though of standard size) with ends only projecting $\frac{3}{4}$ in., instead of as usual $1\frac{1}{2}$ in., as I have always done? This suits all my hives, which I am thereby able to make flush on the outside, allowing my outer cases to come closer to the body hive? 3. While writing, may I say without offence that I dislike the improved (?) front page of the JOURNAL? Bee-keeping is so essentially a rural pursuit, that while it is so treated it is a real rest to busy men to indulge in it; but if it is all to be ruled down to mere *business* much of the restful pleasure will be eliminated. I should prefer a design that harmonised with country scenes and rural relaxations.—F. V. H., *Buxted.*

REPLY.—1. It is considered wrong to frame the perforated "Wells dummy," because that operation increases the space between the face of the combs next the dummy, and thus lessens the chance of the bees of both brood-chambers crowding close up on both sides of the perforated divider. The forming of one continuous cluster, extending through both brood-chambers, is one of the most important features of the "Wells system," and to increase the space between the outer faces of the combs on each side the divider to $\frac{1}{2}$ in. (as the $\frac{1}{4}$-in. framing would do) will make it more than probable that no brood would be reared in the cells next to the divider; as so often happens in the outer combs of an ordinary hive. 2. There is no reason why you should not use a $15\frac{1}{2}$-in. top-bar if preferred, except the important fact of your frames not being "Standard" size, and consequently of less value commercially. 3. We are sorry you disapprove of the change in our front page, especially when it has been approved by so large a majority who have expressed an opinion thereon.

[953.] *Using Full Sheets of Foundation in Sections.*—1. Would you advise me using full sheets of foundation in sections? Would it not be detected by the consumer? 2. Kindly

say if you think the "Wells" hive the most profitable hive in the market. — DECOY, *Pickering.*

REPLY.—1. If only the thinnest make of super-foundation is used, it will not be detected or found objectionable to consumers. 2. By some bee-keepers the "Wells" hive has been found to yield far more profitable returns than those managed on the single-queen system. Much, however, depends on the bee-keeper himself, and, except in the hands of suitable persons, we should not like to say it is "the most profitable hive on the market."

[954.]—*Material for Dividers.*—I have not had much experience with bees, but seeing so many accounts of the "Wells" hive, I have constructed one myself. 1. I have two stocks I wishto transfer to the "Wells" hive—how soon may I venture to do this? 2. What is the best material for dividers for section honey — wood or metal? I have an idea that wood is the best, but should like to have your opinion. — A. BLAKE, *Westerham Hill, February* 6.

REPLY.—1. See reply to D. Logan. 2. Wood is generally believed to be a more suitable material for dividers than metal; but very good results are supposed to follow the use of finely-perforated zinc for the purpose.

AN "OLD SCHOOL" BEE-MAN.

(*Continued from p.* 57.)

What is known as the bee fever had not overtaken me when I first found my way to the old bee-keeper; I was just sickening for it. I did not want to run a bee-yard then, nor "pull" queens, being as ignorant of frame hives, bee-yards, "pulled" queens, as the old man was himself. Years afterwards I knew why I went that way so often: I wanted to see the old line of skeps and the bees hurrying to their flowers; I wanted to see the whinberry-blossom on the hill, the forget-me-not by the brook, the gentian blue of bird's-eye in the old lane. Walking up the latter one day, I met the old man cutting long bramble wires. He made his own skeps, and used these to bind them. The skeps were very small indeed —some of them twenty years old, and very rotten. The bottom rim had given way in one or two, closing the entrance, and the bees worked in and out through a crack in the stand. The hackle was made of wheat straw, over which, when growing, the bees had often passed on their way to the brook. Sitting on the bank, and talking about bees, as was our wont, I advised him to add "ekes" to the hives—two or three rims of straw to heighten them. On my next visit I saw that he had done this—not, however, with straw, but disused tyres of cart-wheels about 4 in. wide. Instead of two bees being able to enter now, a cat might easily have crept through the open door. Yet those bonny creatures set-to, extended the combs to the stand, went through the winter, clustered outside, hung in knots and bunches from the stand, swarmed and cast, as they had done time out of mind. Seeking to show him a better way, I gave him a "copyable" hive, fitted it up with the next swarm that came off, and showed him how to handle them. That winter he made some from this pattern, but improved away one leg —putting two in front and one behind—and also made a one-inch entrance, eschewing entrance slides and porch. The frames were not exactly parallel one with another, neither were they at right angles. they were made as though the special object in view was to have them firmly fixed together soon after hiving the bees! The dummy-board was improved right away. Spring came again; the daphne flowered and filled the cottage with fragrance; the snowdrops and crocus blossomed in bunches under the bare raspberry canes, as they had done for sixty years; catkins hung—many a thousand chinese lanterns—from poplar, alder, and hazel. Pushing through the wood to gather the celandine, the children from the school on the hill brought down clouds of pollen from the sallow bloom—the "palm"—and reached and stretched a hand to gather it. They made a posy of this, with "pussies" from the hazel, bright alandine, a dandelion disc, and one drooping anemone. Straight from the hives the bees came; they, too, wanted to be amongst the flowers again, and in the evening came the silent moths to feast themselves till they slumbered on the flowers.

Spring came, and onward from the catkins the bees found abundance of blossom. The swallows returned to their eaves, the martins to their holes in the quarry under the hill, the landrail to his favourite mead. To see the tender green of grass blade and leaf, of tender petal of wood-sorrel and ladies'-smock; the cuckoo came. He had never missed for how many thousand years?

The first week in June the old man looked for swarms. The bees had been "knit" about entrances, showing the hives were crowded, for many days. He did not watch for them. By pausing now and then at his work he could hear the well-known thrilling sound. The frame-hive had been anointed with dandelion, wine, sugar, and sweet herbs. The frames were in, but no guides. His bees wanted no guides; he only waited for the sound—so delightful to all bee-men—of the swarm on the wing. It came, and the bent, aged man suddenly renewed his youth! He almost ran up the garden, carrying the hive. There they were, still coming out! "Be quick!" he cried; "fetch the key and pan to ring them down. That's right! tum, tum, tum. Strike up, mother! Tum, tum, tum, tum. They be a going off! Give it me; I'll foller 'em." Tum, tum, tum. And away he went through a gap and across the meadow.

The tum, tum became fainter as the distance increased. The cloud of bees caught against

the high hedge and seemed about to settle. The queen, however, drifted over, and away they went, now across the heightening corn. The tum, tum was fainter still. Was it a pleasant sound? In itself it was not. The mower whetting his scythe, the reaping-machine, like some giant grasshopper, incessantly stridulating. These were not pleasant sounds, only as serving to take us at a glance to the fields where they were. Hearing the first tum, tum, we hear and see plainly the swarm of bees. The whetting of the scythe—the mere sound—and we see the long swathes of fallen flowers; we scent from afar the new-mown hay. After a flood which has swept away human life, human hearts wildly beat seeking their children. After the terrible scythe has passed, the larks—their little hearts beating—sadly search between the swathes. The grasshopper reaping-machine brings to mind the glory of the golden corn, a broad band of it falling as the machine runs round. Thus the sounds, not really pleasant in themselves, became so from the pictures they convey to the mind; therefore I like to hear the ringing of a swarm, and shall always make for it, partly because it is dying out, and the day is fast coming when cottagers will want to "run" a bee-yard and "pull" queens.

The swarm brought to at the opposite side of the field, upon a hawthorn branch, which leaned out of the hedge with the weight. Overjoyed, the bee-man hastened for the frame hive and a few cabbage leaves. He placed it beneath them, shook the bees in—sish!—covered over the frames with cabbage leaves, put on the roof, and the deed was done. No veil, no gloves, no smoke, nor yet creosote, neither tied sleeves. The bees would not sting him. Not they! The hive was left there till the evening, then brought through the young corn and mowing-grass, over the gap, and set down among the raspberry canes. Standing there, painted a gaudy colour, with raspberries on one side, rough-red gooseberries leaning on the other, and ash-leaf potatoes reaching to the flight-board, it did seem, as the passers-by said, "a new-fangled thing." The old man himself eyed it askance. He said to himself: "How shall I put them down? I can't, so they bees will have to stand over the year, be they as light as a cast." For, as yet, I had not initiated him into the mystery of section cases.

The swarm worked well, as swarms that issue in that sweet time—the beginning of June—ever will. Never were the flowers more plentiful, the honey more luscious, the morning so tempting for early rising, the comb sweeter. So white and fragile and beautiful the combs were, I thought them meet to be the cradles of the future lovers of the flowers; meet to be the storehouse of their gifts—precious essences and the golden grain of pollen.

As though the flowers knew they had a city to build and winter stores to garner, each vied with the other in decking herself in her brightest petals, scattering sweetest of scent, holding out handsful of honey. Thyme crept higher still on the mound, harebells conquered the grass, a thousand spires of wood-sage leaning, hop-trefoil and yellow lotus, mouse-ear, hawk-weed—such a glow of colour you scarce could look at it. Bedstraw creeping, white paths amongst the heath, water-avens nodding; and although we thought it had finished, blossoming again—tall mullein among white campion, tempting pink centaury, broad burnished candelabras of St. John's-wort—eye-bright on the hill, violet-like butterwort by the brook, archangel, sanicle, and betony in the wood, tufts of dyer's greenweed yellowing the pasture, with milkwort, tormentil and scabions between. By the side of the wood, on the driest spot over where the rabbits have burrowed, stems of yellow-wort thread through their leaves and hold a cup of flowers; bind-weed twisted round and round itself, striving to get so high; hazel giving a hand to bryony; fox-glove pushing by thistle, tall sentinels overlooking the hedge and agrimony under—how many thousands were there? I never could tell. Always when I went that way I found new flowers—some plant that I could not name. But the bees knew them, they were always there—everywhere I went—searching for flowers.—LORDSWOOD.

(To be continued.)

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

R. SALMON (Stonehouse).—Bees sent are hybrid carniolans.

E. A. GIBBON (Wexford).—*An early Queen Wasp.*—The insect sent is a queen wasp; no doubt aroused from its hybernating condition by the mildness of the season. February 5 is a very early date for it to be flying.

R. G. (Renfrewshire).—1. *Index.*—The *lapsus* referred to occurred, much to our regret, during the confusion of changing printers at end of last year. 2. *Bees not Taking to Sections.*—There are occasions when bees refuse to enter surplus chambers even when no excluder is used. By covering the centre frames with queen-excluder the chances of brood in sections are very considerably reduced though not entirely prevented.

R. J. SARGINT (Cahir).—The "Guide Book, price 1s. 8d. post-free, will answer your purpose.

Editorial, Notices, &c.

FOREIGN COMPETITION.

THE "BRITISH BEE JOURNAL" AND ITS CORRESPONDENTS.

Much of the correspondence to which reference was made in the closing paragraph of "Useful Hints" on p. 62 last week, owes any interest it may possess for the general reader to the widely divergent views of the same subject entertained by the several writers. However, by way of closing the foreign honey question in this issue, and of redeeming our promise to deal with the subject this week, we turn to the formidable pile of letters before us hardly knowing how to begin our self-imposed task.

It may be at once seen that many correspondents in their several communications deal neither justly nor fairly with ourselves. They would insist upon us confining our view of the case to the very narrow limits beyond which their own notions of right and wrong will not penetrate, while, as we think, they entirely fail to grasp the real point of the question at issue. What object, for instance, could we have in acting otherwise than using our best endeavours in safeguarding the interests of the British bee-keeper in every legitimate way? We are firmly convinced that narrow and mistaken views of what these interests are will result in serious ultimate harm to the pursuit if not put aside at once. What possible success, we ask, could attend any attempt to stop the importation of foreign honey into this country? And is it not more than doubtful that permanent good to the British bee-keeper would result if it could be so shut out from our market? We must seek some other remedy for the evils of which some correspondents complain than that of closing our doors to the foreigner. The fact that British bee-keepers are unanimous as to the advantage it would be to the home-producer if the foreign product could be traded with in this country only as such, again impels us to ask, is it possible to devise a scheme for accomplishing this? and we still wait a reply.

In a letter before us, Mr. J. Pearman, of Derby, after charging us with throwing cold water on his proposal—made at a meeting of Derbyshire bee-keepers, and referred to in the report of the annual meeting of the D.B.K.A. on p. 32 of our issue for January 25—that a petition should be presented to Parliament in favour of marking all foreign honey imported, continues:—

> I am glad to say it was carried unanimously, and we intend to carry it out. I can assure you our Committee feel strongly on the manner you have slighted our proposal.

We are not aware if the above is intended as an official expression of the views of the D.B.K.A. Committee—of which Mr. Pearman is a member—but, while disclaiming any intention of casting a slight either upon the Committee or the proposal, we, nevertheless, claim a perfect right to state our belief in the futility of hoping for any favourable result from it. The writer, however, further says:—

> Do not mislead your leaders (?). As a free trader I do not ask that it (foreign honey) should be prohibited, but that the public should know what they are buying; neither do we ask for a special Bill for bee-keepers, but that we may be included in the Trade Marks Act. Would you have us believe that nothing will come from the Royal Commission or the Select Committee's recommendation to have foreign meat labelled? and why not bee-keepers be included? It seems ridiculous to say you 'do not think it possible to devise a scheme capable of practical application in the manner proposed.' Why not? If it can be done with matches sold at one penny per dozen, I do not think there would be much difficulty in the matter of labelling foreign honey, if shopkeepers knew it was in accordance with law; neither do I think there would be so much imported. Without a doubt in bee-keeping you are A1, but in this matter I think you are fifty years behind the times. The Chancellor of the Exchequer said here the other night, certain laws must come because it was the voice of the people. Let this be the voice of all bee-keepers, and I appeal to all Associations to follow in the footsteps of the Derbyshire Bee-keepers' Association, and you, Messrs. Editors, give us your support instead of throwing cold water upon it, and victory is ours.

Having dealt with the whole subject in our leader on p. 41 of BEE JOURNAL for February 1, comment on the above may be confined to remarking that our correspondent is unfortunate in instancing the marking of foreign matches as being analogous to marking honey. Matches are imported in the actual packages in

which they are sold, consequently nothing can be easier than dealing with them under the Trade Marks Act, but can the same be said of honey? Would not the honey question be more aptly compared to a shipload of timber, imported in huge "baulks" or in "deals," and asking that the cargo be followed up and marked as "foreign" through all the multifarious articles into which the timber may chance to be manufactured in this country? Our view is that the foreign honey would be about as difficult to trace in its passage through the hands of those who "handle it" as would the timber.

A good deal of adverse criticism has also been expressed as to the policy of advertising foreign honey in our pages, but the writers overlook the fact that if the honey referred to is as poor in quality as some describe it, it was worth no more than the price asked for it. And the many instances quoted in letters before us, giving various opinions as to its "badness" as well as the inferiority of foreign honey generally, only tend to confirm the simple fact that good British honey will always command a far better price than that which, in addition to being "foreign," is also bad. It is also certain that the cheaper foreign article on our markets helps to popularise the use of honey as food among the masses.

The question of dealing with the varying conditions — advantageous and otherwise — under which bee-keepers labour is also a most complex one to those occupying the position we do, and it all bears in some way upon the same competition question. One writer dating from Elstow, Beds, says:—

> It is one thing to get honey and quite another to sell it easily, and it is questionable which is the most difficult of the two.
>
> The happy places into which some bee-keepers have fallen is apparent by the way in which they ask 9d. per lb. for their honey by the cwt.
>
> The quality of the honey has been improved and the price reduced—a state of things which should command a sale, yet I find that, although there may be more honey sold than formerly, yet somehow there is not a demand for it.

Another bee-keeper writes from Cheshire on the 5th inst.:—

> I have sold nearly all my twelve hundred pounds of last season's honey at good prices.

We could multiply contrasts like the above, and it is within our personal knowledge that over £250 worth of home-grown honey has been bought from British bee-keepers, and paid for last autumn through the agency of our "deposit" system by one purchaser. How could we more fairly prove to despondent bee-men that native honey can be sold than by quoting facts like the above? But we just come to a more cheery epistle on the subject of honey-selling from Berks, wherein the writer says:—

> I am delighted with your article in this week's B. J. on the question of foreign competition. It ought to be carefully read and pondered over by all who have condemned the publication of the advertisement referred to. I think it will do good rather than harm to the British honey industry, especially if the honey is as bad as your Worcestershire correspondent states on p. 45. It is absurd to think of stopping foreign competition. It is the labelling it "foreign honey" we must try for, and then try our utmost to produce our own in the best and most attractive form, and offer it at the cheapest rate consistent with a fair profit. There are many people in all lines of business that want a larger profit than is fair, and when trade is dull are generally found to be the first to cry out. It would be one step in the right direction if all county associations were to follow a similar plan to the Berkshire Association to dispose of members' honey. But I have seen sections of honey for sale in shop windows in a very untidy and unattractive form, and how is it possible for such stuff to be sold? I never have any difficulty in disposing of my surplus at 8d., 9d., and 10d. per lb., according to time of season. And to those who have a difficulty in selling let them try a plan I have found to succeed, and that is to send a small sample early in the season to persons likely to become purchasers. I have sold large quantities that way. If we are to compete successfully with the foreigner we must adopt every reasonable means of introducing honey to customers and to the public in general. But if honey is to be more largely used it will have to be sold much cheaper than 10d. or 1s. per lb.

We conclude our extracts with a letter just to hand. The writer, though adopting a *nom de plume*, sends his name and address as a guarantee of his *bona fides*, and says:—

> Please let me state at commencement that I have been a bee-keeper for at least fifteen years, that I at present hold fourteen stocks, and that I prefer to make the best price I can of my honey. With this preface let me say that, when I saw S.I. honey advertised and recommended by a well-known and respected firm at 4½d. per pound, I felt at once that it

was an opportunity to teach the British public a further lesson upon the value of honey as food. In addition to being a bee-keeper, I spend about £9,000 per year upon food for a large school, and I at once secured 1,320 pounds of Sandwich Island honey for consumption by British boys with their bread and butter. I have pleased my employers, I have pleased their pupils, and I hope I have not displeased the liberal class of British bee-keepers. Protection may suit a class, but had we not better try to serve the greater body, and let our aim be a higher and a broader one, than to keep up the price of honey for a short time by a narrow-minded policy? Let us never forget from how wide a stretch our bees gather, and that we do not care in whose gardens they forage. In my opinion, the arrival and sale of this honey will increase the demand generally, because the public will learn its value as food, and not treat it as medicine, and a drug to be kept merely in the cupboard as a remedy for sore throats and boils. It was in the same way that our Canadian friends at the Indian and Colonial Exhibition educated us with the tea-spoon, when thousands tasted honey for the first time. English honey did not go down in price in consequence of the bold step Messrs. Jones and Corneil took when they brought so many tons of Canadian honey to England, and we must be cowards to sit still and weep over the arrival of this little lot. Let us try to produce the best quality we can, and as so many parts of the United Kingdom are famous for first-class honey, that we need not fear even

"Hoky-poky Wanky-fum,
King of the Sandwich Islands."
Old Song.

I shall be glad to be told in your next by our croaking brothers, by whom better honey is produced than by British bee-keepers.—ONE OF US.

With the above facts before them, and all that has previously appeared for reference, we think it will be generally admitted that the foreign competition question, so far as its contentious or controversial side is concerned, may now be allowed to drop. We therefore express a hope that bee-keeping readers—while agreeing as to the need of a practical scheme for pushing the sale of British honey and of making it recognisable as such—will resolve to work harmoniously together with the object of formulating a plan likely to achieve that result.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of January, 1894, was £5,047.—*From a return furnished by the Statistical Office, H.M. Customs.*

NORTH NORFOLK BEE-KEEPERS' ASSOCIATION.

At a meeting held at Briston on Wednesday, January 31, an Association of the above name was formed with officers and rules. All inquiries and applications for membership to be addressed to the Secretary, Mr. C. J. Cooke, The Apiary, Edgefield, Melton Constable.

ROXBURGHSHIRE BEE-KEEPERS' ASSOCIATION.

The annual general meeting of the Roxburghshire Bee-keepers' Association was held in the Sessional School on Saturday, February 3. Mr. William Marr occupied the chair, and there was a good attendance.

The minutes of previous meeting having been read. Mr. Clark, Secretary, submitted the financial report for last year, which showed that there was, including a balance from the previous year, an income of £21. 14s. 3d., and the expenditure for the same time was £19. 4s. 4½d., leaving a balance to the good of £2. 9s. 10½d.

Referring to a proposal that Dr. Fyfe be elected President for the current year, that gentleman thought they should confer the honour on Dr. Blair (who was not present), but if Dr. Blair declined he (Dr. Fyfe) would be very glad to accept the office. Mr. J. K. Young was appointed Vice-President, and Mr. Thos. Clark re-elected Secretary and Treasurer. The following Committee were also appointed:—Mr. Robert Fairbairn, Mr. James Kerr, Mr. George Ormiston, Mr. Walter Oliver, Mr. Robert Sinton, Mr. James Whellans, Mr. Charles Irvine, jun., Mr. James Thomson, Mr. William Wilson, Mr. Robert Miller, and Mr. Alexander Brownlee.

A discussion afterwards took place on the desirability or otherwise of holding the annual exhibition of the Society in different centres throughout the county. It was eventually decided to continue as at present for the current year at least, though the Vice-President (Mr. Young) considered they ought to make further inquiries whether or not they could not get sufficient encouragement to hold their show in different centres. This was all the business.

BRISTOL DISTRICT BEE-KEEPERS' ASSOCIATION.

A Committee meeting was held at 12, High-street, the chair being taken by Mr. Ernest A. S. Cotterell, in the absence of Mr. J. B. Butler. Amongst those present were Mr. J. Brown (hon. sec.), and Messrs. T. James, J. Martin, S. Wilcox, J. Jordan, and W. Webley. The chief business was the election of experts for the various districts in North Somerset and South Gloucestershire, and the arrangements for holding an annual

show of honey and bee-keeping appliances. It was decided to hold the annual show in conjunction with the Knowle and Totterdown Horticultural Society's Show, to be held on July 20 and 21, in the grounds of Mr. E. J. Thatcher; and arrangements were made for a very liberal list of prizes, including special classes for cottagers, and also classes for one bottle and one section of honey.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.' All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see 1st page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

DEALING WITH FOUL BROOD.

[1761.] During the winter I have been refreshing my memory by reading over again my stock of old BEE JOURNALS, and, seeing frequent mention of foul brood, I thought I might relate my experience of the pest and my attempts to cure it. I commenced bee-keeping in 1887. The following summer I had no surplus, but increased my stock by two. In the summer of 1889 I found foul brood in one of my hives. It was my strongest hive all the season, and in spring it robbed two stocks in skeps belonging to a neighbour. It swarmed about the middle of June, and both stock and swarm worked well and gave me good returns, in fact, better than any other hive I had. Before the hive was supered I noticed that the cappings of the brood had a sunken appearance, and suspected foul brood. I tried several of the cells and found in them, instead of brood, dark, sticky matter, as described in articles on foul brood. At this time the hive was near the swarming, and I resolved to let them swarm, so that I might see the extent of the evil. They swarmed in June, and in due time I found dead brood in nearly all the combs, and three or four of them in a bad state. Acting on the advice of an old bee-man, I took out all the worst combs and put in sheets of foundation, thinking that, as the hive was strong, the bees would overcome the disease. In 1890 it was still there, and by 1891 it had spread over all my hives. By that time my stock had increased to nine, and if I had made a bonfire of the lot (bees and combs) I should have saved myself a deal of worry and not have been at much greater loss than I was the other way. However, I saw naphthol beta and naphthaline mentioned as a cure in the BEE JOURNAL, and I resolved to try them. I got a supply from the BEE JOURNAL office in the autumn of 1891. I put pieces of naphthaline in each hive, and fed all up with syrup made of the best sugar I could get, carefully medicated, as directed, with naphthol beta. In the spring of 1892 found the most of my stock comparatively weak, so reduced them to four by uniting. In our district that spring was very backward, and the bees getting very little outside, the latter end of May found them short of stores. I commenced to feed slowly with medicated syrup, and continued to do so until the clover commenced to yield nectar about the middle of June. My four hives throve well, and yielded a fair surplus, rather better than the average of the district, and one of them sent forth a large swarm. In autumn, when the brood was all hatched, I examined these four hives very carefully, and, still finding traces of the enemy, I decided to shake the bees off the combs, make them into two lots, put them into thoroughly clean hives, and feed with medicated syrup. I did so, and last summer (1893) I saw no trace of the disease. I am not certain, but believe my bees got the disease from one of the hives they robbed. In 1892 we found a hive belonging to a gardener here bad with the disease. On my advice he shook all the bees off the combs, gave them sheets of foundation, and fed with syrup (not medicated), and since then they have been free of the trouble.—D. M., Feb. 16.

THE PAST SEASON IN HUNTS.

BEE-KEEPING AND FARMING.

[1762.] Not having seen a report from Hunts in the BRITISH BEE JOURNAL for some time, I thought it might interest some readers to know what the bees have been doing here last season. I wintered twenty-six stocks, and they were almost up to swarming-point by the middle of April; in fact, the only swarm I had came off in that month, this being my second April swarm in about eighteen years' experience. I think my stocks were as strong by May 1 as at any time during the summer. We have no fruit bloom here, our chief harvest is from the white clover in the pastures, but, owing to the drought, the first crop of that was almost a failure. We had, however, a second crop in mid-August, and the fine weather caused the honey to roll in for a few days, so that my average (about 30 lb. per hive) was fairly good for our neighbourhood. We had the same curious features of the season as chronicled elsewhere—viz., scarcity of swarms and the small proportion of drones. Some of the latter must have had long lives though, for I had queens fertilised as late as

the middle of September. Bees have had frequent flights this winter, and for the last few days have been busy on the crocus, now in full bloom. My stocks are still unopened, but evidently breeding has begun. The gale on the 11th and 12th inst. carried the roofs off more of my hives than I have had blown off altogether during the time I have kept bees. I have only lost one weak lot out of thirty-three stocks this winter, and that I ought to have united last autumn. I made two artificial swarms, and started them in a "Wells," but find the bees have nearly all got into one compartment. I don't think the "Wells" system will come into general use.

Now, Messrs. Editors, as we are going to have the "Royal" show at Cambridge, about twelve miles from here, and as I hope to spend a day or two there, I shall be glad to take you home with me, if you are present and have an evening to spare, to see me and my bees, and then in the morning I shall be pleased to drive you round to some brother bee-keepers, who, I believe, intend taking some of the prizes there. Taking bee-keeping altogether, the last two years, I can tell you, it has paid me much better for the time and capital invested in it than my farming has done during the same period; but I am in hopes that better times are in store both for bee-keepers and farmers. —RICHARD FEW, *Needingworth, Hunts.*

WEATHER FORECASTS.

[1763.] Ever since a forecast for 1894 by a Mr. Clements appeared in B.J. columns your correspondents have been congratulating us on the prospects of the year. May I point out that, if we are to judge at all by the first month, no reliance whatever can be placed upon this forecast? Mr. Clements says of January simply that it "will be a rather dry month." Now, in eight out of the twelve districts into which the Meteorological Office divides the United Kingdom the rainfall was above the average; while here, in West Sussex, it was more than double the average, and we had the wettest January for the last ten years. Having kept a careful record of the weather for the last ten years, I have lost all faith in weather-prophets. Two others whose efforts I have seen differed widely from Mr. Clements, but were equally wide of the mark.—L. B. BIRKETT, *Westbourne, February* 12.

MEAD MAKING.

[1764] I notice from what appears in your pages that some correspondents are troubled at times in selling the whole of their surplus honey, and I am sometimes in the same fix, so I use up any I have left on hand in making mead. I have now a 32-gallon cask of it which was "tapped" the other day ready for "testing" its "condition." It is good now, but when twelve months (or better still, two years) old it will be prime. With a licence to sell I could dispose of any quantity of our home-made mead, for those who partake of it once never afterwards forget to inquire very affectionately after the "barrel," by which is meant the contents. My chief trouble is to keep any of it long enough to develop its finest condition, so numerous are the calls on the mead barrel; and I am sure that your readers who are bee-keepers will find a satisfactory way of using their unsaleable honey in the manufacture of a wholesome and pleasant beverage for home use.—R. CHAPMAN, *Newton, February* 16.

[After the favourable description given above of the contents of the "barrel," it is quite certain that we shall only anticipate the wishes of many readers by requesting our correspondent to furnish us with particulars of his method of "brewing," for publication in our columns.—EDS.]

WIDTH OF COMBS FOR BROOD-NESTS.

[1765.] I enclose a cutting from the *Sydney Mail* of December last on the subject of spacing frames, which may be of interest to some of the readers of the BEE JOURNAL. I intend testing it myself this summer, as I do not use metal ends and can easily do so, but should like the opinion of some of our prominent bee-keepers on the subject. Referring to "early preparation for winter" I can confirm what Mr. Woodley says (1,709, p. 23) on the subject. My idea was that the sooner the queen got her rest in the autumn the sooner she began laying in the spring, but probably his idea is the more correct one. Hive roofs.—I have both painted wood roofs and roofs covered with thin waterproof material and painted over that, but both have leaked very much this winter, although painted in the autumn. I think that the very heavy snow and rain storms accompanied with high winds may account for them leaking so much more this year than ever I have had them do before. High winds have been more prevalent here this winter than I have ever known them since I came to this district seven years ago. I had an accident which I might mention as a warning to others. My apiary being some distance from my house, I carelessly left a large bottle of diluted carbolic on the quilts of a hive when packing up for winter, and, being covered by the roof, it was out of sight. During one of the frosty nights about the New Year it had frozen; when a thaw came the bottle burst, and any one can imagine the state of the quilts when I went to examine the hive fully three weeks after. I am just longing for a mild day to shift the bees into a dry hive. I am sorry to say it is my choicest queen, too.

Snowdrops and crocuses are blooming fully a month earlier than usual here—so early, in

fact, that if the weather does not improve soon, they will be over before the bees fly.—Hy. Marry, *Rosewell, Midlothian, February* 17.

[We had already seen the paper referred to, and were not impressed with the desirability of publishing it. The results of your intended trial of the 1⅛ in. spacing for brood-combs we will gladly give insertion to if you will kindly forward same, but we are not sanguine of any benefit being likely to arise from the use of such thin combs in this country.—Eds.]

SWARMS IN MARCH AND APRIL.

[1766.] The swarms we are going to have next "March and April" is far more interesting matter to me than a deal that appears in your pages on foreign honey, &c. I for one should be very pleased to see my bees ready to swarm even in May. I am afraid, however, that the weather will prevent the little plan from being carried out, and I fancy that when your plumping has been done you have the colony in just the same state as you would if the old system was carried on, and if they find no food coming in perhaps they will request the unlucky larvæ to step outside. However careful the bee-keeper may be, he will soon find out that the queen is very much the best judge of the quantity of brood the bees can take care of. I plumped a colony last year in the hope of making them swarm, as I wanted some queens reared under the swarming impluse, and had to destroy a comb or two of dead brood which had not been sealed over. I noticed in one of Mr. Webster's letters that he uses no veil; I had a good try at that business, taking a nasty rap now and again, trusting that perseverance would succeed in enabling me to defy stings; until one day a bee went round and round in my ear a little too quick, and in consequence the honour of handling bees without a veil shall fall on others than Leonard Smith, *Beds.*

MISCELLANEOUS.

[1767.] *Swarms in March and April.*—I have obtained one of the pamphlets on the above, and, seeing that my stocks are situated within a few minutes' walk of a large orchard well stocked with fruit trees and bushes, I hope by adopting the "S. S." method to get the hives well populated with young bees in time for the early flow. In former years my bees have not been ready to take advantage of the nectar in the fruit blossoms, though last year I got a few pounds of greenish honey, with a very sharp flavour, and which granulated almost immediately after it was extracted. An expert tells me it was gooseberry honey. I will work two of my stocks on the principle "S. S." recommends, and will let you know the result.

Watering-places.—I tried the tea-leaves plan advised by Mr. Woodley a year or two ago, but as a few of my fowls were allowed to run loose in the apiary the tea-leaves disappeared with astonishing rapidity. Bees are busily gathering pollen in the abnormally warm weather we are having.

Bees and Raspberries.—In the orchard before mentioned raspberry canes are planted in thousands, and I have often observed vast numbers of bees have been at work upon them even when the weather was wet. Bee-keepers who have a garden take Mr. T. Holliday's advice (1736, p. 47) and plant some raspberry canes.

The Rainfall.—A friend of mine here who makes a diurnal entry of the rainfall, temperature, atmospheric pressure, &c., has kindly furnished me with the following statistics:—Locality, Stoke Prior; Height above sea level, 225 ft. Greatest rainfall for the year since 1877 was 35·05 in. in 1882. The two years when the least rain fell was 1887 and 1893, when the depth was 17·34 in. and 17·71 in. respectively, but 1887 was preceded by a wet year, 30·79 in., whereas 1892 was a dry one, 18·28 in. The rainfall here for the whole of last month was only 1·41 in., although rain fell on twenty-two days; most fell on the 30th, when 0·25 in. was registered. At Ventnor, Isle of Wight, however, over 4·5 in. fell during January.—Percy Leigh, *Stoke Prior.*

NOTES FOR BEGINNERS.

[1768.] I beg to offer a few notes which may be useful for beginners. Bees in this locality have come through the winter so far in remarkably fine condition. Activity appears to have already commenced; on the 4th inst. they were collecting pollen from snowdrops, an unmistakable sign that breeding has commenced with some stocks; this, together with the mild weather we have had, will draw rather heavily on their stores, which should not be allowed to run short. Recently, whilst melting wax, I had a visit from one of our little friends; this should be a warning for us to be wise in time, by keeping entrances narrow, placing all empty combs or honey out of the bees' reach, keeping stocks as quiet and undisturbed as possible. I attach great importance to this point, for their powers will be required later on in the spring. I have invariably found large (and sometimes small) cakes of wax to crack upon cooling; this spoils the appearance, and, to prevent it, I cover the hot wax and mould, or vessel containing it, with two thick pieces of flannel, and let it cool gradually, taking care the mould is clean, and had cold water standing in it for a few hours previous to running in the wax. Of course, the flannel must not touch the wax itself. I have never found this simple plan fail.

Referring to British honey, and the promotion of its sale, I consider it is the duty of Associations to assist in the adoption of a

scheme for the disposal of their members' produce; also by directing their energies toward organising good honey shows where possible; show the public we need not send abroad for our honey, but that it can be and is produced at home.

Where is our old friend "Extractor"—is he put by for the winter? If so, I shall be glad to fetch him out so that we may have a "Hut" extract sometimes. He and all others who give us choice bits have the hearty and best wishes of many besides H. HILL, *Ambaston.*

COVERING FOR HIVE ROOFS.

[1769.] Many of your correspondents are seeking a light and durable covering for the roofs of their hives. Wire-wove roofing is just what they require—is light and durable, and may be got in sheets 10 ft. by 4 ft. at a cost of 5½d. to 6d. per square foot, and for all practical purposes is indestructible by the weather, and is not affected by heat or cold.—W. D., *Stoke-on-Trent.*

[1770.] So much has been said lately about covering for hive roofs, I may venture to suggest to readers my plan of making them waterproof, and that is by simply using asphalt, which is easily procured at 4d. per yard, and with me it has never failed. I always give the roofs a coat of gas-tar or paint after packing them up for winter, and find that by spring all the stickiness has gone off and there is no disagreeableness when handling. Altogether it makes a very warm covering—far better, in my opinion, than zinc. Hoping this may be of some use to readers. — J. WATERFIELD, *Kibworth, February* 12.

THE "WELLS" DUMMY.

TAMING VICIOUS BEES.

[1771.] I see great stress is laid upon having the right dummy for the "Wells" hive. Many have a dummy which is not the "Wells" dummy, through no fault of their own, but because such was sent as the genuine article by their dealer. I sent for one at the beginning of last bee season, and received a dummy which is three-eighths of an inch thick and the holes countersunk on each side. Has any bee-keeper succeeded with one of this description? Mr. John Walton is the only one who has given his experience so far, I believe. Having had no swarms, I have not been able to test mine. Does Mr. Wells supply his particular dummy?—[We believe he does.—EDS.]

Now that a great effort is made to raise the minor industry of bee-keeping to a higher level, it behoves all votaries to "assist the impulse." I was very fortunate to get a good start. A kind gentleman in the neighbourhood, I suppose thinking me a promising subject, at first interested me in bees and then offered to procure a stock at a reasonable price. He not only did this, but carted it to my garden, put everything all right, and promised to give me the first swarm from his apiary. And such a swarm!—nine pounds in weight. We cannot expect all to act so generously as this, but each one can look out somebody and peg away at him till he gets "the fever," when all will be plain sailing.

Here are two methods for subduing bees. I give them for the benefit (?) of bee-keepers. "When you want to look at the bees just give 'em a plenty of carbolic, they will lie quiet as lambs"—so said number one as he sprinkled (?) them from a pint bottle with his finger partly over the mouth. Poor things, what could they do when they and their combs were dripping wet? Number two, while keeping up a fusilade of smoke, addressed his exhortation to the bees, "Now, whose to be master, me or you? Us always fight for 't, but I beant gwain to stop till you gives in." Well, I came away with the conviction that in this case "vicious bees" were not good honey producers.

Would it not be well for the B.B.K.A. to approach the Education Department with the view of getting bee-keeping recognised as a class or specific subject in Great Britain?—TYRO, *N. Devon.*

[Efforts have been made in this direction already, and will be continued whenever an opportunity occurs.—EDS.]

Queries and Replies.

[955.] *Transferring to Frame-hives.* — I wish to ask your advice as follows:—1. I have two stocks of bees in skeps, which I wish to transfer into a frame-hive, uniting them at the same time. As I wish to unite the two lots, is it not my best plan to drive the bees and transfer any combs containing brood? 2. I also wish to transfer a stock already in a frame-hive into another hive, and as I wish to get both stocks strong as soon as possible, how soon may I perform these operations?—W. R. B., *Hunts, February* 12.

REPLY. — 1. Before recommending the method of dealing with the two skeps stated above, we should like to be quite sure as to the advisability or otherwise of the transferring and uniting proposed. Unless the combs in skeps are fairly new, and in good shape for tying into the frames, together with being quite certain that both lots of bees are perfectly healthy, we should not transfer at all, but furnish the frame hive with a swarm and new straight combs the bees would build therein. We are very chary in advising transfers like the above, there being so much to prefer in the alternative course mentioned. 2. The stock last mentioned may be transferred on any warm day when the bees are flying freely; but if the combs and bees of skeps are operated

on, we should defer it till warm, settled weather in April, and be very careful not to chill the brood in transferring the combs.

[956.] *Clarifying Discoloured Wax.*—Kindly say how I can get enclosed sample of wax to a right colour. When first extracted its colour was a nice light yellow. I then melted it and passed it through rain-water, when it turned the colour of sample enclosed. I remelted it several times but with no better luck.—A. E. W., *Camphire.*

REPLY.—There is little doubt that the wax has been discoloured or stained by its absorption of the sooty particles in the rain-water. It would be difficult to restore its original colour, but, excepting for exhibition or trade purposes, it is no worse than before. The addition of a small quantity of oil of vitriol improves the colour of beeswax when melting, but we are not certain if it would take away the staining referred to.

[957.] *Bees and Early Wild Flowers.*—I moved my bees to a field in close proximity to several hundred acres of woodland, in which grows an abundance of primroses, violets, and other wild flowers in the early spring. 1. Do you think there is sufficient honey to be gathered from such flowers as to make it worth my while to try the new method of "swarms in March and April" for the purpose of securing a harvest thereby? 2. The gamekeeper in the wood referred to above always gets early swarms, and yet he never stimulates his bees in any way; but he loses many swarms by their decamping to hollow trees about. I am afraid I shall lose swarms in the same way, and so ask if you would advise me to clip the queen's wings? 3. My hives each hold ten frames and a dummy. Could I work them on the "Wells" system by allowing each queen five standard and five shallow frames for brood-rearing, and giving plenty of super-room above? 4. Where can I get instruction for queen-rearing?—R. CHAPMAN, *Newton.*

REPLY.—1. Bees do gather a little from some wild flowers, but not in sufficient quantity to make it worth while preparing for a harvest from that source. The only real early harvest is that got from fruit-bloom and such early flowering trees as sycamore and occasionally hawthorn. 2. No doubt the shelter and consequent warmer temperature of the woods may cause early swarms, but the size of the skeps used will also probably have some influence in the same direction. As a means of preventing swarms decamping, clipping the wings of queens is effective enough, but it will require someone at hand to secure such swarms as come off and discover the mutilated queen on the ground as they sometimes do. Personally, we not like queen clipping at all, and should only tolerate it in cases of real necessity. 3. A hive of ten frames is too small for dividing into a double-queen colony, and would not give the "Wells system" a fair chance, even if worked as proposed. 4. Instructions for queen-rearing are given in the *Bee-keepers' Guide Book.*

[958.] *Re-queening.*—Having several hives, I wish to re-queen this year. I should be glad of your opinion as to the easiest and yet safest method—whether giving queen-cells or first raising queens in nucleus hives, and then introducing them? Also what time of year is the best?—INQUIRER.

REPLY.—It is certainly *safer* to get the young queens hatched out and fertilised in nucleus hives before removing those they are intended to replace than undergo the risks inseparable from giving queen-cells after removal of the old queen; but, on the other hand, the plan of removing the old queen—so soon as the honey season begins to fail—and allowing the bees to raise a successor, while equally safe, involves less trouble, and combines, as far as possible, ease with safety.

THE "WELLS SYSTEM" FOR BEGINNERS.

A correspondent, under the initials G. F. D., asks some questions intended for reply in our query column. The substance of his letter, however, is so analogous to many others reaching us on the same subject that we give more prominence than usual to our reply for the benefit of other beginners, the bent of whose inclinations tend in the same direction.

G. F. D. writes:—

"Will you kindly reply to following queries:—1. Is it necessary to enlarge the brood nest of a Wells hive by allowing the respective queens to breed in a shallow-frame surplus-box placed overhead, of course dividing the latter by a perforated dummy? 2. How many supers are necessary for this? 3. Would not sheet-lead, perforated as th wooden one is, answer for a 'Wells dummy,' seeing that it would not warp? 4. How are nuclei formed? I think I understand how to make them up, but want to know how to prevent the bees flying back. 5. How many supers are needed for a bar-frame hive; *i.e.*, how many do you use?"

Now, the general tenor of the above queries leads irresistibly to the conclusion that our correspondent has not yet gone through even the elementary stage of bee-craft, and seeing that the "Wells system" is essentially a system suited only for the experienced bee-keeper, it is almost hopeless to expect success with it in the hands of a novice. He would at times be confronted with difficulties from which—with his limited knowledge—he could scarcely hope to escape without disaster of some sort. We, therefore, recommend our correspondent, and, indeed, all similarly placed, to procure and read up a reliable book on bees

in order to obtain some grasp of the main principles which must guide those who take in hand to control and manage the busy bee.

We are very glad to render such advice as the limited space in our reply column affords room for to all who are in want of help or such counsel as we can offer, but it is quite obvious that only a complete work on bees can give such full details of bee-operations as will enable the bee-kesper to know "the why and wherefore" of what he does; and without this knowledge he is less than half informed of what he should know if he is to make a success of what he is endeavouring to accomplish. A complete work of some kind on the subject is, therefore, indispensable to everyone who aspires to become a successful bee-keeper on the modern method.

Finally, and not to pass over our correspondent's queries altogether without definite reply, we may say that No. 1 for answer only requires reference to what has appeared in our pages repeatedly—viz., that Mr. Wells is perforce obliged to enlarge the brood chambers of his hives by the addition of shallow frames overhead, and to which the queen has access, because of the hives he had in possession before starting his new system only holding seven standard frames in each compartment of the lower brood chamber. Were it otherwise, or if his hives had held so many frames as experience shows to be necessary for the brood compartment, no shallow frames would be required for brood purposes. The second query we do not quite understand. Regarding the third, it may be said that a worse material than sheet-lead could hardly be conceived for a dummy on which the bees are supposed to cluster in winter for mutual warmth. Nos. 4 and 5 will be far better answered and understood by reference to a good book on bee management.

THE "WELLS" SYSTEM.

LECTURE BY MR. WELLS.

Under the auspices of the Northumberland and Durham Bee-keepers' Association Mr. Wells, of Aylesford, Kent, delivered a lecture on "Bee-keeping," in the Mining Institute, Newcastle, on the 12th inst., to a large and interested audience. Mr. Wells' system of double-queen hives has been regarded with keen interest by bee-keepers in all parts of the country. Many enthusiasts have been personally to inspect his successful bee-garden in Kent, and have adopted the system. It was thought desirable to have a practical explanation of the system from the inventor himself, and he was invited to come North by the Association for that purpose. Mr. Wells brought with him a double-queen hive, which he took to pieces before the audience, and, while describing his arrangements, gave many valuable hints to those interested in bees. In the course of his remarks he intimated that he had experimented for results with five single-queen hives *v.* five double-queen hives, and found that the single hives gave 205 lb. of honey, or an average of 41 lb. each, while the double hives gave 789 lb., or an average of 157 lb. each. The financial results obtained during the last three years had averaged over £40 per annum from about ten hives erected on his principle. The Durham County Council has also secured the services of Mr. Wells to lecture at Consett and other places.

AN "OLD SCHOOL" BEE-MAN.

(*Concluded from p.* 70.)

As separate races of men naturally associate together in whatever country they adopt, so the races of flowers always gravitate one towards the other. The wild thyme kept religiously its own ramparts on the hill, the water-avens always with bent head deep in meditation, preferred the quiet of the deepest part of the wood, vain forget-me-not stayed by the brook always bending to look at her face reflected in the water. Fox-glove stood by fox-glove; thistle by thistle. Here was a whole colony of two-blade orchis. There, where the brook parted, an island of meadow sweet. Wood anemone in the spring did indeed encroach a little way out in the pasture bordering the wood—their country was so populous they were obliged to emigrate—but the bees found them there, they were always searching—everywhere I went—searching for flowers!

Thus sitting on the banks in the old garden and watching for many hours the labouring breath of the old skeps dissolving in warm, flower-scented air, I became fully conscious of, and understood why the old man so loved his bees. Without physical effort his mind travelled out with them over the flower-strewn earth—mental walks up the toilsome hill, by the green path through the mowing-grass, deep down in the shady dell. When the cabbage leaves over the frames of the new-fangled hive had withered, he bethought himself of looking inside, which, after much deliberation, he did. Manipulation of bees, as we knew it, was foreign to him, for save hiving a swarm or "putting them down" he had done nothing. Cottage beekeepers have not many appliances. They have elder troughs for feeding, hazel wands, cut while the sap is in them to fix in the skeps, and at swarming time the pan and key were kept handy. Thus, the matter of taking off the roof required due care, and was not to be done without inward qualms and tremblings. The old dame came out to see it done, standing at a safe distance under the damson trees. To get a good purchase the old man swept aside the gooseberry bush—they were rough-reds—with one foot and trod upon some young raspberry canes with the other. Grasping the roof and prising it, he lifted it off and gently laid it down. The withered leaves had kept the bees down

in the frames, six of which—there were no more—were full of combs, and smaller combs in the space behind were fastened to the hive sides. Having no carpet, he sent the old dame for a wisp of hay, which being brought, he covered over the frames with it and over all replaced the roof.

I went that way very often then, for the rough, red gooseberries were dead ripe, and I liked them far better than the big ones we grew at home. Seeing my pupil did not learn modern ways of keeping bees, I began to think it would have been better to have let well alone. Better not initiate him into the mystery of section cases or extractors; rather let him keep to the skeps and the old, old way. I like to think of him now, fearful that the swarm would settle on a dead branch—an old superstition. I like to picture him making the bee-food (dandelion wine, ale, and sugar), and taking out the elder troughs, rather than, as it might have been, making artificial swarms in March, worrying himself about "metal ends" having a spur or not, or trying the "Wells system."

For many years, as the summers came and went, I drove his bees—those hives that were very heavy, and those that were too light to stand over the year. About ten or twelve were "condemned," and the bees came in very useful for increasing my hives and strengthening others. Being rather tender-hearted, I essayed not to "bump" them in a wholesale manner, but drove them out into skeps, leaving them on the old stand till evening. Then I drove quietly home—pneumatic safeties to carry bees not being invented then—with those dear insects, saved from the brimstone-pit, humming a sad dirge of their lost homes, and the mellow harvest moon rising and sending a soft gleam on the broad band of corn felled as the grasshopper reaping machine went round and round.

The martins had left their eaves, acorns were dropping, hips and haws were wonderful to see, when I went that way again. There was sad news—my old friend was no more!

In the old, old room, kneeling down and looking through the old diamond panes, over the long line of skeps, over the hawthorn hedge and green pasture, across the cornfield and the valley of the brook beyond, upward to the heather and thyme-clad hills—looking over scenes well known and dear for many many years—alone, he died. Pleasant was the odour of honeycomb, straining in the huge jar on the hearth, as the old dame chatted of bygone times, while I sat sipping cowslip wine and listening. There is, indeed, much to learn from these simple cottagers, who belong to the old school, much of kindliness, hospitality and piety, and those who have earned the title of the bee-man stand out from among their fellows as superior in intellect and knowledge. Any man may keep bees, but very few—only one here and there—earn the title of the bee-man of the village.

The next year was the terrible one of 1888, and although the hives had been whispered to about the death of their master, every stock died, except five—three skeps and two frame hives—in July. The sons, not "taking kindly to bees," have neglected them, and only two remain alive to-day. The garden which once rang with their tuneful hum, seems strangely silent now, but when I walk through the same fields in the summer time, along the old lane, even more overgrown, in the wood where the blue bells and anemones still flourish, along the brook side to gather forget-me-nots and sweet woodbine, upon the thyme-scented hill—everywhere I go—there the hive bees are; always searching, and humming to their flowers.—LORDSWOOD.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column. Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

ERRATA.—In reply to query 950 (p. 68) fourth line of reply, for "called" read "*and* formic acid." And in following line read *fruit* sugar instead of "cane" sugar.

T. T. W. R.—*Suspected Dysentery.*—It does not always follow that the spotting referred to, unless excessive, is really caused by dysentery. When the weather is warmer, it may be well to lift out a comb or two, and if the marks are seen on the combs and hive sides remedial measures may be needed, perhaps a change of hive. Meantime, you had better do no more than watch the bees from the outside as occasion offers.

A. B. TRYTHALL. — *Lantern Slides.* — The B.B.J. does not "loan out" lantern-slides. We have forwarded your letter to the Secretary of the B.B.K.A., to whom it should have been addressed.

F. JELLICO (Blackrock).—*Ekes below Frames in Winter.*—Two inches of space below frames in winter would, no doubt, answer equally well as a greater depth. The "eke" referred to on p. 60 is made 3 in. deep for the purpose of converting (in case of need) a shallow-frame box into a standard brood-chamber as stated.

B. DRAKE (Horrabridge).—*Transferring from Skeps to Frame-hives.*—Kindly refer to B.J. for February 8, p. 58, for reply.

J. HENDERSON BULCOCK (Hazlemere).—The Hon. Sec. of the Lanc. and Cheshire B.K.A. is Mr. T. D. Schofield, Alderley Edge, Cheshire.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual general meeting of the above Association was held on Wednesday, February 21, in the Board-room of the R.S.P.C.A., Jermyn-street. In the unavoidable absence of the President, the Baroness Burdett-Coutts, and the Vice-President, Sir James Whitehead, M.P., both of whom wrote regretting their inability to be present, the Chairman of the Committee, Mr. T. W. Cowan, presided, and was supported by the Hon. and Rev. H. Bligh, Revs. F. T. Scott, G. W. Bancks, W. E. Burkitt, and E. Davenport, Major Fair, Captain Fox, Messrs. T. Bevan, S. J. Baldwin, H. W. Brice, W. B. Carr, J. J. Crosby (Miss), M. E. Eyton, J. Garratt, J. M. Hooker, W. H. Harris, H. Jonas, H. G. Morris, W. P. Meadows, F. H. Meggy, J. H. New, D. Rayner, W. J. Sheppard, E. D. Till, A. D. Woodley, John Huckle, Secretary, and others.

In moving the adoption of the report and statement of accounts for the past year, the Chairman observed that he was sorry to find that their financial position was now no better than it was a year ago. After all that had been done the income had been only inappreciably added to, no County Association having increased their affiliation fees in any case. As the income is entirely inadequate for the effective carrying on of the Association's work, it was important that the meeting should carefully consider the several recommendations made by the Committee, more especially those brought forward by the Finance Committee, who had given the financial position of the Association much thought and attention. First it was proposed that the affiliated Associations should be called upon to forego the medals usually given on the payment of an affiliation fee of one guinea. The Committee proposed that all Associations desirous of having the medals on payment for them (of which there are several already notified) should be allowed to do so on increasing the payment to two guineas. Another important point was the proposal to withdraw the Association's funded capital.

In support of the Committee's proposals the Chairman stated that the Finance Committee's report had been submitted to the President, who—writing from Rome a few days ago—strongly advocated the adoption of the Committee's recommendations on all points except the withdrawal of capital from the Post-Office Savings Bank.

The members would observe from the report that steps had been taken by the Committee to avoid if possible the withdrawal of the Association's invested funds. The Committee desired to press the question most strongly upon the affiliated Associations and individual members—if the work was to go on more support must be obtained. It would be observed that many members had transferred their subscriptions to the county Associations, and the income under this head was now £50 less than it was a few years ago. All this meant a curtailment of the work. The affiliated Associations were greatly interested in this question, for he felt sure that if the central society was compelled to suspend its labours the county Associations would also soon cease to exist.

Mr. W. H. Harris seconded the motion.

Considerable discussion followed.

The Rev. E. Davenport, after expressing regret at the gloomy state of affairs, took exception to the proposal to withdraw the medals. The competitions for these at the country exhibitions were important, and in the event of their withdrawal he should almost feel inclined to ask what were the benefits derived from affiliation.

Mr. Bevan considered that the affiliation fee of one guinea might be retained, and that the rule by which the Associations be allowed to purchase the medals at a little over cost price should be made permanent. He was acquainted with several societies which granted medals in this way, and he knew of no society which gave medals in return for an affiliation fee.

Mr. Harris supported Mr. Bevan's suggestion.

Mr. Till drew the attention of the meeting to the fact of the Committee having stated in their report that they were looking for the affiliated Associations to support them in this proposal. They had to face a great difficulty in regard to finance, and he was of opinion that when the several affiliated Associations came to consider the position of the central society they would see that the parent had some claim upon its children.

The Rev. E. Davenport did not think that it was so much a question of money as of principle. His own Association was in a fairly prosperous condition, for which they were much indebted to the County Council for the support accorded to them. He thought he could promise a donation of £5 to the fund being raised (cheers).

Mr. A. D. Woodley considered that as a matter of economy the proposal in regard to the medals was not a wise one; economy might be effected in other ways.

The Chairman remarked that it was owing entirely to the action of the Central Society that bee-keeping had been brought forward as a subject for technical instruction and included in the educational code for teaching in the elementary schools, and there were still subjects to be dealt with. Matters would have to be brought before the Government, and who was to undertake this work except the Central Society? A purely local society would not be in a position to do it. If Mr. Woodley would point out in what way further economy might

be practised the Committee would be glad to receive suggestions.

Miss Eyton (Shropshire Association), Major Fair (Middlesex Association), Mr. Garratt (Kent Association), and Mr. Meggy (Essex) supported the proposals of the Committee. The latter considered that the present position of bee-keeping was entirely due to the action of the Central Society in the past, and, without some central body to take the work in hand, it would be impossible to obtain any national recognition.

Mr. Meadows (Leicester) was of opinion that more would be done by the Affiliated Associations were it not for the fact that many of them were in much the same position in regard to funds as the Central Society.

Mr. Harris considered that whenever an Affiliated Association was in a position to assist the Central Society it should cheerfully do it, even as an act of gratitude.

The Rev. E. Davenport and Mr. A. D. Woodley promised that the matter should be brought before their respective Associations at their forthcoming meetings.

Mr. Till advocated the claims of the B.B.K.A. on its Affiliated Associations, instancing the indirect help rendered to the latter by such efforts to arouse interest in bee-keeping as that at the Mansion House recently. By the publicity thus given in the newspapers persons are induced to start bee-keeping and eventually to join bee Associations. He thought that county Associations had not sufficient consideration for the financial needs of the central body.

After further discussion, during which several representatives of county Associations undertook to pay the increased fee in order to obtain the medals, it was resolved, on the motion of Mr. Bevan, that the proposal of the Committee to retain the present affiliation fee of one guinea, and to supply medals and a certificate for an additional £1. 1s., be approved.

Mr. Jonas next moved, "That the Committee be empowered to withdraw—if necessary—the funded capital of the Association as invested in the Post Office Savings Bank." The Rev. G. W. Bancks seconded the motion, which was carried, and the report was then adopted unanimously, with a special vote of thanks to Mr. Kirchner, the Auditor.

The Rev. F. T. Scott moved, and the Rev. W. E. Burkitt seconded, a vote of thanks to the retiring Officers and Committee. Carried.

On the motion of the Hon. and Rev. H. Bligh, seconded by Mr. E. D. Till, a very hearty vote of thanks was accorded to the Council of the Royal Society for the Prevention of Cruelty to Animals for the gratuitous use of their Board-room for Committee and other meetings.

Mr. Jonas moved the re-election of the President, Vice-Presidents, Hon. Members and Corresponding Members, Treasurer, Auditor, Analyst, Librarian, and Secretary, for the year 1894, in accordance with Rules 5 and 9. Carried.

The Chairman then proposed to add two names to the list of Hon. Members, the first of which would be familiar to most of those present as that of the originator of the Central Association and also of the BRITISH BEE JOURNAL. He referred to Mr. Chas. N. Abbott (applause). Mr. Abbott, he was happy to say, was still among us, though not in the enjoyment of very good health, and he thought it would be a graceful compliment to their old friend and a slight acknowledgment of the services he had rendered to bee-keeping to convey to him this mark of their esteem (hear, hear). The other name he had to propose was that of Dr. de Planta, a distinguished scientist, who had rendered much service to bee-keepers by his investigation into the nature and causes of those mysterious diseases to which bees are subject.

The Chairman's proposition was carried with acclamation.*

The Chairman read the results of the nominations for the Committee to act during 1894:—Hon. and Rev. H. Bligh, Rev. G. W. Bancks, Thos. W. Cowan, Capt. Campbell, W. Broughton Carr, Rev. R. Errington, Major Fair, J. Garratt, W. H. Harris, Henry Jonas, J. H. New, W. J. Sheppard, E. D. Till, and H. F. Witherley.

The motion standing in the name of Mr. Jonas, having reference to the invested funds of the Association, was moved in connection with the annual report.

Mr. Garratt then moved the next item on the agenda paper, which was to the effect:—"That the undertaking of the Association to provide Judges and Examiners to the Affiliated Associations, as set forth in the privileges of affiliation, be withdrawn." In moving this resolution, Mr. Garratt observed that, considering the discussion which had taken place on the report, it might be well for him to state that in moving this resolution he had consulted with no one, nor had he even asked any one to second his motion. He considered the present undertaking pressed very unfairly upon the Association, and more unfairly still upon the person who was called upon to undertake the work. It was well known that the burden fell very heavily upon a few individuals who were called upon to do a great deal in this way, and the loss of time so incurred was a serious matter.

Moreover, in the future it was proposed to establish centres for examinations, and these were to be conducted quite apart from the judging of an exhibition. The time occupied would be considerably increased, and he thought it was only right that some fee in addition to the out-of-pocket expenses should be paid by the affiliated Associations.

[Since the above was in type, we learn, with deep regret, which will, no doubt, be shared by all our readers, that Mr. C. N. Abbott is lying dangerously ill, with but slight hope of recovery.—EDS.]

Mr. Bevan seconded the motion.

Mr. Hooker observed that very few persons knew the amount of time occupied in judging at shows, especially when combined with the examination of candidates for expert certificates, as was often the case. He instanced a show at which he had himself officiated, and where the time taken up in going and coming and getting through the work had occupied him for two and a-half days, on the third of which days he reached his home at midnight.

Considerable discussion followed, and various amendments were considered with the view of including a fee (where required) in addition to the personal out-of-pocket expenses as now paid.

Miss Eyton hoped that no decision would be arrived at in regard to any additional payments under this head at the present time. She suggested that the matter should stand over and first be submitted to the several affiliated Associations for their consideration.

The Hon. and Rev. H. Bligh supported Miss Eyton's proposition.

Mr. A. D. Woodley moved "the previous question." Mr. Meadows seconded, but the motion was lost. The Rev. E. Davenport then moved "That the matter be referred to the Committee for their consideration, and be brought forward at the next annual meeting." Seconded by the Hon. and Rev. H. Bligh, and carried.

On the motion of the Chairman, it was unanimously resolved, "That the Committee be empowered to elect corresponding members, as recommended in the Committee's report for 1893."

This concluded the ordinary business.

Committee meeting held at 17, King William-street, Strand, London, W.C., on Wednesday, the 21st. Present:—T. W. Cowan (in the chair), Rev. Dr. Bartrum, Hon. and Rev. H. Bligh, J. H. New, E. D. Till, H. Jonas, Major Fair, Rev. C. W. Bancks, W. B. Carr, J. W. Sheppard, J. Garratt, and Rev. W. E. Burkitt (ex officio), John Huckle (Secretary).

Mr. Lees McClure wrote expressing his regret at not being able to be present.

The minutes of the last meeting were read and confirmed. The statement of accounts to February 13 were considered and approved.

The Secretary reported that arrangements had been concluded with the Royal Counties Agricultural Society for an exhibition of honey, &c., at their forthcoming Exhibition to be held at Canterbury.

A letter was read from the Secretary of the Derbyshire Association inquiring as to whether the Affiliated Associations would be allowed to have medals for competition during 1894 providing an increased fee was paid.

Resolved, "That, subject to the approval of the general meeting, each affiliated Association be allowed to have the medals and certificates during 1894 on payment of £1. 1s. additional fee."

Correspondence was read from the Secretary of the National Co-operative Festival held at the Crystal Palace inquiring upon what terms the B.B.K.A. would undertake the section of that exhibition allotted to honey.

The Committee were of opinion that this exhibition was an important one, and that, providing favourable arrangements could be made, the undertaking might be entered upon. The Secretary was instructed to communicate further with the Secretary of the Crystal Palace Exhibition, and to accept the undertaking on stated terms.

The Chairman called attention to its being the last meeting of the Committee elected for the past year, and tendered his thanks to his colleagues for the support they had given him during the year. Mr. Garratt returned thanks on behalf of the Committee, and warmly eulogised the Chairman for the large amount of work he had done, and the kindly interest he he had taken in the Association and its work for a long period of time.

The following new members were elected:—J. M. Wohlgemuth, Woking; T. Bevan, East Finchley; S. C. Chadwick, Malton, Yorks; H. F. Wetherby, Blackheath; Rev. R. Summerfield, Ripon; G. Fancourt, Stamford; P. Scattergood, Stapleford.

(Report of Conversazione next week.)

MIDDLESEX ASSOCIATION.

The annual general meeting of the Middlesex Bee-Keepers' Association was held on Wednesday, the 14th inst., in the Board-room of the Royal Society for the Prevention of Cruelty to Animals, kindly lent for the occasion. In the absence of the President, the Baroness Burdett-Coutts, who was abroad, T. W. Cowan, Esq., Vice-President and Chairman of the Association, presided.

Amongst those present were the following officers and members:—Messrs. W. H. Harris, H. Jonas (Treasurer), H. W. Ford, J. Gittins, J. T. Harveyson, G. W. Smyth, H. A. Jones, H. B. Lee, T. Bevan, Mrs. Carter, Rev. W. Handcock, and Major Fair (General Secretary), &c.

The Chairman, in opening the proceedings, remarked that the finances were very satisfactory, there being a balance of £12. 5s. 7d. from 1893, exclusive of subscriptions paid in advance. This was the more satisfactory when the general depression of trade in the past year was considered. The subscriptions for 1893 were in excess of those received in 1892. Commenting on the large, but decreasing, importations of honey from abroad, he (the Chairman) did not think that British bee-keepers had anything to fear from the introduction of low-priced foreign honey, the greater part of which was of mediocre grade—such as that, for instance, from the Sandwich

Islands—and none of it could compare with the home production in aroma and flavour. What the British bee-keeper should work for was to foster and increase the production of British honey, so as to give a steady and sufficient supply to our markets; and the producer should learn to be content with fairly remunerative prices, and there would be no fear but what British honey would hold its own. He strongly advocated the adoption of co-operative or Association labels. These should indicate an unfailing guarantee of the quality of the honey, and the public would soon learn to discriminate between the foreign and the home production.

It was unanimously carried that the report be adopted and the balance-sheet passed.

The following resolution was then put and carried unanimously :—"That the best thanks of the Association be offered to the R.S.P.C.A. for the gratuitous use of their board-room."

It was proposed and carried by acclamation :—"That the Baroness Burdett-Coutts be re-elected President." In putting this to the meeting the Chairman said that he, in common with all present, regretted the absence of her ladyship, but it was impossible for her to preside this year as heretofore, as she was abroad.

The following Vice-Presidents were re-elected :—Lord George Hamilton, the Hon. and Rev. H. Bligh, Sir John Lubbock, Messrs. T. W. Cowan, A. Lafone, M.P., E. M. Nelson, and H. C. Stephenson, M.P.

The Treasurer, General Secretary, Provincial and District Secretaries, and Auditor, together with the other officers of the Association, being duly elected, the proceedings terminated with a vote of thanks to the Chairman for presiding.

The result of the usual drawing of prizes was announced at the close.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of Advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1772.] The weather has been more seasonable the last week—frosty nights and sunny days. On Saturday, February 24, the thaw set in, and the bees were on the wing in large numbers during the greater part of the day, and busy at the watering places, showing that brood rearing has started.

The locality seems an important factor in determining the quantity of rainfall. Mr. Birkett (1763) thinks no reliance can be placed on weather prophets. Then on next page (76), Mr. Leigh shows that, notwithstanding rain fell on twenty-two days, yet the aggregate amount was only 1·41 in., though at Ventnor the quantity was 4·5 in. In my note on Mr. Clement's forecast readers will notice I say if the good time promised should prove correct then bee-keepers will be, those happy bee-men.

I am pleased to see Mr. D. M.'s (1761) letter on Foul Brood, the matter is dealt with in a practical manner. Though the scientific method of cure failed, the practical method appears to have eradicated the pest. I hope D. M. will be able to write further on the subject later on, when he is able to examine his hives carefully during May or June. Mr. McEvoy's method of cure is similar to the method followed by D. M. in his final trial, that appears to have been successful, as no trace of the disease appeared during last year. Then his friend the gardener's bees were were treated in a similar manner, though with the difference that one apiary was fed on medicated food which cured, and the other on food *not* medicated, yet the cure was equally prompt and effectual. (Query :—Was medicine required by the bees?) D. M. does not say if he hived his bees in the autumn of '92 on foundation or put them on clean combs, also how did he disinfect his hives? Also what did he do with the frames of food in the hives when he united his bees into two lots to start anew? Was this food fed to the bees after being made into syrup, or was it destroyed (or made into mead)? I should gather that D. M. still uses the same hives, as, when he speaks of making a clean sweep by fire, he brackets (hives and combs), inferring that the hives should be saved from destruction. I am asking these questions in the hope that D. M. will give further details for the benefit of his brother bee-keepers who may unfortunately get the pest in their apiaries.

I had some gentlemen to visit me to see my apiary and talk bees from North Hants last week, and their experience of foul brood was similar to D. M.'s, and final method of cure on nearly the same lines, and when I told them I had had no dealings with the enemy, and that I was trying to boycott it by using disinfectants in all my hives, they said I did not know the worry of bee-keeping yet. I, of course, said I did not wish to know it. The subject is of such vital importance to the craft, especially to those who, like myself, have large apiaries, that a method which will eradicate the pest effectually ought to be chronicled in the pages of the journal devoted to bee-keeping. The *Bee-keeper's Review* (American), both January and February Nos., contain articles on the subject, the one by Mr. Taylor, Apiarist at the

Michigan State Apiary is especially interesting, perhaps our editor can spare room for it in BRITISH BEE JOURNAL.

The British and county Associations are feeling the continued depression in agriculture in their subscription lists, and it must vex the friends of apiculture to know that our parent Association feel constrained to draw on their reserve fund to meet current expenses. Cannot the number of subscribers be increased for the year? This will help somewhat. Then county Associations should continue their affiliation fees as usual, and not desire the medals this year; in fact, the affiliated Associations have not proved very great helps to the parent Association in the past, when we come to consider that the British gave a silver and bronze medal and certificate to each Association in affiliation whose fee was only a guinea.

The "Wells" dummy (that received the medal, I think) at Chester was under a ¾-in. thick, I should think, and had been used, so that it was a genuine one exhibited by Mr. Wells. I had one in use last season made like it, and a large part of the holes were filled with propolis, or bee-glue. I have two of the kind "Tyro" mentions, countersunk holes each side, and I see no reason why these are not equal to the real "Wells" make. The holes require to be burnt with a red-hot skewer, possibly this charred surface may prevent propolisation; then, again, the district may have to do with much or little propolisation, also the strain of bees. Some stocks of bees use a great deal more than others. I would suggest to "Tyro" that, when he inoculates his friends with the bee fever that he will point out to them the desirability of becoming members, not only of the local or county Bee-keepers Association, but also of the British Bee-keepers' Association, which is the parent of all other Bee-keepers' Associations. The advantages will be mutual.—W. WOODLEY, *Beedon, Newbury.*

IN THE HUT.

Oh, Memory! Fond memory!
When all things fail we fly to thee!
We bid thee bring us back the years,
The thoughts, the friends we lov'd so well.
E'en our sorrows June endears,
Breathe upon us thy magic spell!

[1773.] My pen refuses, as you can see by the scratching on the MS. corner. Positively "jibs" at the invocation; for—so far as the old hut is concerned—

The garden that knew it shall know it no more.

It took an invocation of another kind to get it to budge from the old spot when the family changed quarters—the hut, not the garden—and now it stands (much the same as ever, barring it wants another coat—of paint—to keep the weather out) in a bee pasturage in which the bees can give those in the old quarters 25 yards in 100 and win "wings down" in honey-getting. On the steep side of a valley facing south-east the hut looks on clover fields "held up at it" on the opposite side. Ah, the old times in the hut, smoking and arguing bee-jaw, and unwittingly asphyxiating ourselves with carbon fumes from the stove—fumes that, like Sterne's starling, "couldn't get out." Your readers *won't* remember that I had in the hut an Abbott's observatory hive, just an ordinary hive, taking standard frames, and made with glass sides instead of wooden ones, having a flat glass top instead of the usual peaked roof. This hive was so placed that the light from the window shone between the frames, and

Here I used to sit, and sit,
And muse, and muse (not feline mews!)

I used to think the bees got used to it, and were amused.

They would go about the ordinary avocations of "domesticity" (Gilbert) quite unconcernedly, and seemed not to care a rap if I even tapped on the glass. 'Twas here I had my first opportunity of watching cases of bee-palsy, the mysterious shiverum, shakiness, the trembling, groggy gait, that has puzzled so many (we are talking about bees, cynic). It was the wintering in this hive that forced me to this conclusion:—plenty of circulating air, with protection from wet and snow are *sine quâ non* in future; hence the presence of American bacon boxes over my hives nowadays. Here it was I found the use of soft boiler felt and strips of thick kamptulicon as cover and quilt—three strips make one quilt, and you may examine any three or four frames you like without disturbing the rest of the brood-nest.

There was something (shall I say some spirit?) about the Hut in those days that stole over me and stimulated bantering chaff, which you wot of, aye, and seriously speaking, solemn thoughts (I *cannot* be serious!) for the soberest moments. The lonely watchings in light and darkness; sitting in darkness and getting light, dear friends; the mysterious *changing* sounds, so clearly heard by a supersensitive ear at such times! Memory surges these into the mind now I have aroused her and they flood along faster than pen can paint them.

I cannot go on. *I* cannot tell your readers anything about bees and bee-keeping but what they ought by this to have learnt from your columns, but I can tell this:—Memory has given me one of my old and pleasant half-hours thus spent in rubbing off the dust which obscured the Hut, and—X-TRACTOR.

TRANSFERRING BEES.

THE EVILS OF NON-STANDARD FRAMES.

[1774.] I have much pleasure in thanking you for information received by reading your BRITISH BEE JOURNAL for the past eight

months ; I never thought I should keep bees, as I used to dread the sight of them ; but through a bee-keeping friend I resolved to try my hand. My friend got me my first two lots in August, 1892, now I have three single and one double hive, which are all doing well. The worst fault I have to contend with is that my frames and hives are ½ in. short of the standard size. I intend, however, to make my hives and frames all of standard size, and have already got three new hives prepared with extra body-boxes to replace the ones now in use. I, therefore, wish to ask, 1. Which would be the best course for me to take in changing? Should I cut the combs out of the present frames, and tie them in the new standards? Or, 2. Put full sheets of foundation in the standard frames, and insert them in the hives the bees now occupy, for them to draw the foundation out? I find the standard frames will just go in the old hives. After the bees have drawn out the foundation I could transfer them and the bees into the standard size hives. Any other course you may suggest, I should be pleased to learn. 3. Is there any way of keeping earwigs out of hives? In this neighbourhood we were much troubled with these pests last year. Do they do any harm in the hives?

I was quite satisfied with the quantity of honey I got last year, being my first bee-season. From three single hives I took about 90 lb. of surplus, and left nine frames full in each for the bees to winter on. When packing my hives for winter I put two sheets of brown paper over quilt, and on this a sack. I had a bag full of ears cut from oat-stalks, which I got when thrashing, and among this I put some camphor. It made a nice pillow, easy to pack and very warm. The roofs of two of my hives are covered with unbleached calico. I painted the roof before putting this on, then gave three coats of paint on the calico. These roofs were as dry as a bone, but the other two hive roofs (made with boards overlapping each other) were very damp, and I had to change the packing and put on some dry. I have put corrugated iron over these roofs for the present to prevent more wet getting in, and tied them on with wire bound round the hives. I have to fasten my roofs securely, as my garden, in which the hives stand, is on the top of a railway embankment about 30 ft. high, and exposed to all the winds that blow. I was very uneasy on one day lately when I could hardly stand in the garden for the gale, and there is nothing for protection. I expected to find the hives down the bank on the following Monday morning, but all's well at present.—A. J. Yeo, *near Cardiff, February* 16.

[1 and 2. We should hesitate in going to the trouble of cutting out the combs from the present frames when the addition of a ¼-in. strip of wood added to the outside of each side-bar would make them the correct standard size. You might select, say, six combs for each hive, and tack on these strips before inserting them in the new hives. Prepare as many new frames as will make up the full complement, with full sheets of foundation, and, as soon as the weather becomes settled and warm, begin inserting these one at a time—at intervals of a few days — between the other brood-combs until all are in. Afterwards, the odd-sized frames may be gradually weeded out and replaced with "standards." 3. Earwigs are more troublesome than harmful. They are rather uncleanly things, and must be brushed from their nesting places into water at intervals and destroyed. There is no other way of dealing with them we know of.—Eds.]

"TANGING" BEES IN 1665.

[1775.] I enclose an extract from an English writer of the seventeenth century, named Dekker, which seems to show a further development of the old wife's "key-and-frying-pan belief" that it would not only make swarms settle, but would even draw them out of the hive. It may interest readers. Dekker (dated 1665) says:—"He was a musicall tinker that on his kettledrum could play any country dance you cald for, and upon holly-dayes had earned money by it, when no fiddler could be heard of. Hee was only feared when he stalkt through some towns where bees were, for he struck so sweetely on the bottome of his copper instrument that he would emptie whole hives and leade the swarmes after him by the sounde."

HIVE ROOFS.

[1776.] I am amused at all the letters you get about hive covers and the remarks thereon. I find nothing so good as zinc over the timber. I have some in use twelve years now, and they are as good as the day they were put on, and never let in a drop of wet. If put on *properly* and turned round the ends of the timber there can be no fault found with them. There are two ways of doing everything; a right and a wrong way—the latter will make the best material useless. —T. J., *Blackrock, February* 17.

THE "W. B. C." HIVE.

1777.] I read with much interest the description of the "W. B. C." hive in the Bee Journal of February 1 and 8. I possess one, supplied by a well-known maker, and after noting that it differed somewhat from the dimensions given in the Record of March, 1890, I am glad to find that it corresponds in all but a few minor points with the present specification. Its inner boxes are stowed away, for, so far, it has only served as a house for one of the skeps with which I started late last season. So the pleasure and experience of working its boxes and frames are yet to come. Still, I think I have seen enough of it and of other good types of hives (some of

which I have ready for next season), and have used it sufficiently to justify my good opinion of its merits. So to-day, in my garden, noting again its trim appearance, the excellent design and proportion of all its parts, lifting off the light but strong roof with two fingers and thumb, and finding all inside as dry as a bone, and knowing that the rather weak stock inside is doing excellently, and consuming (by weight testing) a minimum of food under the warm packing and good ventilation allowed by the hive, I mentally thanked the designer for this and other benefits, and thought I would, with your permission, give my ideas on the merits of the hive, and some remarks on it, which, subject to your comments, may possibly interest brother novices or amateurs making one of these hives from the published description.

The evident advantages of the outer and inner case are, I think, the free circulation of air between door and roof openings, causing in hot weather a dispersal of hot, stagnant air, which must exist in confined spaces in wood hives under sun heat; and in winter, by means of nearly closed outer door, we get a modified air circulation supplying the wide, open inner entrance with abundant fresh air, but preventing strong cold blasts driving direct into the brood nest. The winter Eke, too, is so easily placed under body box for bottom air space, without any disturbance of the outer case arrangements, or requiring the lowering of a movable porch. Then, if warm packing be needed for a weak stock, or in a severe climate, cork-dust can be easily filled in between outer and inner cases at sides and back, leaving the front, or most of it, free for air circulation between door and roof. Mess in removal can be avoided by using thin cotton bags, loosely made, of the size of the space, putting the bags in first.

But I think the greatest advantage of the double case is the absolute dryness insured thereby to the inner boxes, from the fact, that, given a sound roof, even if driving rain is blown or soaks through any crack or joint in the outer case, it cannot touch the completely-separated inner case, nor wet its top coverings.

Moreover, there is all the advantage with the double case of being able to use a plain flat joint for the inner boxes, which is the easiest for separation under propolisation, but the worst for rain leakage, and a plinthed joint for the outer cases, because the objection to plinths, as making difficult the separation of propolised joints, does not here apply; and a plinth, properly made, is an absolute bar to any wet entering the joint.

I will here state my opinion, not as a bee novice, but from other experience, that all plinths for shedding wet clear of a joint should have the inner bottom edge bevelled off, so as to cause the outer corner to form a fairly sharp dripping edge. The effect of this is that rain coming down the plinth drops from the dripping edge clear of the hive side, and will not go up the bevel; whereas, with a flat surface to the bottom of plinth, the raindrops will spread about it, come in contact with hive side, and either be sucked up between it and the plinth by capillary attraction and enter the joint (unless plinth be extra deep in overlap), or else may be driven up and in by wind pressure.

My W.B.C. hive plinths were not made with this bevelled edge, and first one lift and then another in replacement leaked at the four lower corners, the moisture spreading about, and on one occasion dropping in on the windward side and making a pool on the floor-board. The cause was clearly proved to be due to what I have described, and I remedied it in both lifts by bevelling the plinths, not a drop of rain coming through since the alteration, which was made some months ago.

(*Conclusion in our next.*)

[Excepting for its increasing the weight and bulkiness of the hive as a whole, we see only advantage (to the novices especially) in the enlarged body-box suggested by our correspondent, making it to hold twelve frames in lieu of ten. We did not overlook this point in originally offering the hive to bee-keepers, but considered the expediency of making it as small and compact as possible, even with what some consider a disadvantage in manipulating the frames rather than risk its failing to meet with favour on account of its large size. As to chamfering the lower edges of the plinths, several makers of the "W. B. C." hive always do this, and our own are so treated.—EDS.]

NOTES FROM NORTH HANTS.

[1778.] The weather the first part of February was very mild, but the rough winds have kept the bees in most days. On the 14th it was very fine, and pollen was being carried into the hives; that is at least a fortnight earlier than I have seen it before in these parts. I find Symington's penny packets of pea-flour make a good artificial pollen, and last spring, after the bees had once taken to it, they would fly into the boxes of shavings on which the flour was shaken before the boxes had left my hands on taking them out in the morning.

The subject of hive roofs seems to crop up in the JOURNAL very often, so I add my experience:—To make a roof that will turn waterproof for years at least, melt some glue in water and give the roof a good coat of it as hot as you can with a paint brush. Then stick on the roof a piece of unbleached calico, turn the ends of the calico well under the edges of the roof, and next give a good coat of the glue on top of the calico, and work it well in with the paint brush. When it is dry give it three coats of thin paint. Try it, readers, and no matter how shaky your roof-boards, no wet will get through, and it is cheap and looks well when done. Roofs that

I treated this way ten years ago are as dry now as when first done.

Referring to County Council grants, I see by our local paper that the Hants County Council have voted a grant of £100 for instruction in bee-keeping. I have been looking for this before, and hope it will be helpful to our County Association, which seems to have been losing ground for the last year or two.—H. ROWELL, *Hook, Winchfield.*

Echoes from the Hives.

Tvedestrand, Norway, February 5.—The year 1893 was an excellent one for honey with us in Norway, as was 1892 also in some parts of the country. This winter has, so far, been extremely mild ; in fact, a little too mild for the bees, and has made them rather uneasy. On December 29 the blue anemones were out in bloom ; rather an astonishing thing for such a country as Norway, isn't it ? It is the first time I have ever seen such a thing.—HARALD HOVIND.

Queries and Replies.

[959.] *Time for Spring Manipulations.*—1. As it will soon be time for spring manipulations a few hints would be welcome to some of your readers. In what conditions of weather (wind and temperature) is it *safe* to open hives ? Is not the loss of the queen too often to be attributed to exposure, consequent upon early examination of the hives ? Here, in the north, the cold weather prevents bees taking any advantage of the crocuses which the previous mild weather brought into bloom. 2. What do you advise as to feeding ?—F., *Leeds, February* 23.

REPLY.—1. In our last "Hints" (p. 61) we made some observations referring to the dangers consequent on unseasonable manipulation. Very few realise that queens are "balled" and killed by their own bees, sometimes from no other cause than untimely opening up of hives and awkward handling of frames in early spring. Knowing these things makes us chary of advising a too early beginning of spring manipulations. The best guide as to when hives may be opened—without doing more harm than the inevitable cooling of the brood nest, which always follows disturbance in spring—is when the bees are flying freely and gathering honey or pollen. 2. Our advice as to feeding is, "Don't feed unnecessarily." If bees are well supplied with food, no more is needed ; at the same time, bees may be advantageously stimulated to early brood-rearing if it is carefully done, and not started till the bees are fairly working.

[960.] *Moving Bees into Bee-house.*—I have just completed a house for my bees, but am at a loss to know how to remove them from their present position into the house, as they will be unable to see their hives in their new home, which is not more than 12 ft. from the farthest hive as they now stand. I have built the new house with a view of keeping the bees warm and dry, and the hives right side up (it has been very rough here lately). I have the "British Bee-keepers' Guide Book," which I like much ; I also take your BEE JOURNAL weekly, and notice that you answer some very awkward questions sometimes, but there is nothing said in either about bee-houses, though I have about eighty back JOURNALS to refer to. I should be glad to know 1. If bees will do as well in a house as on a stand in the open ? 2. The best way to get them to work from the inside without losing too many ? 3. As the front of the house is white Bath-stone slabs, will it be necessary to paint the entrances of different colours ? 4. Is the sample of sugar sent suitable for feeding bees ? The grocer assured me it was cane sugar, but it is very hard to dissolve. I hope I have not bothered you too much.—J. FORD, *Wilts.*

REPLY.—1. Though the general opinion is that bees are more conveniently managed and that the advantages are on the side of stands in the open, there are several experienced and well-known bee-keepers who prefer to locate the hives in bee-houses. Without going so very far back, plenty of information will be found in former numbers of the BEE JOURNAL on the subject. We will send you a copy containing a full description (with illustration) of a bee-house for 1½d. in stamps. 2. The number above referred to fully replies to this query. 3. It is advantageous to mark in some way the separate entrances, mainly for the purpose of guiding young queens to their own hives when returning from their mating trip. 4. Sugar (if pure cane) will do for feeding, but is not so suitable as that of finer grain, which removes the difficulty in dissolving.

[961.] *Bees under Floor of Summer-house.*—In a few days I shall have the opportunity of transferring some bees (now located under the floor of a summer-house) into a frame-hive, and should like to have your advice as to how to proceed. I can understand driving bees from a skep and then transferring the combs, but they cannot well be driven from under the floor of a summer-house. I suppose one or more of the floor-boards will have to be taken up, the combs carefully cut off, the bees brushed into a skep or other receptacle, then the combs cut and fixed in the frames, and the bees and frames put into the new hive.

1. Is this the best way to proceed ? 2. When could I move the hive about 100 yards ? 3. Should the bees be confined to the hive for any length of time after or before moving ?

I now wish to thank Messrs. F. J. Cribb and W. B. Webster for their methods of carrying bees on bicycles, and to tell them that, although my first attempt seemed clumsy to them, it proved effectual in the end, as the bees are doing well and were flying on Christmas Day and December 31. I wonder whether either of these gentlemen could tell me how to carry a skep with established stock on a bicycle for, say, ten miles? — D'ARCY, *Walthamstow, February* 20.

REPLY.—1. Yes. Of course the bees will require to be "subdued" before operating, and kept under while the work proceeds by means of the smoker. 2. The bees should, when transferred, be moved at once to their new location. 3. No.

[962] *Extracting Unsealed Honey.—Hive Roofs.*—1. I have just been reading the "British Bee-keepers' Guide Book," and I see in almost all directions as to management, "Puff a little smoke into the entrance, and then raise the 'quilt';" and yet more than once I have read in the BRITISH BEE JOURNAL, "The less you disturb your hives the better." Which advice am I to follow? 2. When unsealed honey has been extracted and has been ripening, and is drawn off at the bottom of the ripener, how am I to know how much of it is of proper consistency, as some at the top might be still too watery? 3. As to hive roofs. I have some hives from a first-class maker, with step roofs, but the wood was so unseasoned that they have split all over, though I tarred and sanded them at the first. Would it do to cover them with a plain piece of zinc, disregarding the steps?—R. A. SUMMERFIELD, *Ripon, February* 23.

REPLY.—As there is no inconsistency in the advice referred to we may say follow both and each. In other words, when the hive requires inspection use the smoke; and (like all wise bee-keepers) don't open hives oftener than is necessary. 2. We strongly deprecate extracting "unsealed" honey. All honey should be left on the hives till sealed over, and when this is seen to there is not much fear of watery honey remaining. 3. Yes.

[963.] *Transferring by Inverting Skeps.*—I have a last year's swarm in a skep which I wish to transfer to a frame hive. 1. Can it be done by inverting the skep and placing it under the frame hive, the latter being fitted with full sheets of foundation, and allowing communication through a hole in the floor-board? 2. If so, how soon will it be safe to do it? 3. Do you think the bees would be ready to work in supers in April and May, as there are plenty of fruit trees in the neighbourhood? 4. When using full sheets of foundation in sections, should the foundation be fastened all round or only along the top of the section.—BEGINNER, *Sheffield, February* 19.

REPLY.—1. The plan named has many disadvantages. It is far better to set the skep *above* the frame-hive, and allow the bees to work down into it. 2. The skep might be set above the frames as soon as it shows signs of overcrowding. 3. All depends on the forwardness of stock and the prolificness of the queen. Only very forward colonies are ready to work in supers in April. 4. It is a matter of choice. Unless using section grooved all round, the usual plan is to leave a small space on all sides except the top to allow of the foundation stretching.

AMERICAN QUERIES.

REPLIED TO BY MR. G. M. DOOLITTLE.

I am requested to reply through *Gleanings* to the following questions, which I will do with the Editor's permission:—

1. *Straightening crooked combs.*—"What is the best course to pursue with brood-combs that are buckled or bent, so that some of the cells are not deep enough for breeding? Is there any way of bringing them straight? The foundation became bent before the bees built up the comb."

There was a neglect on the part of some one in having the foundation bent when it was given to the bees, or in giving it at such times that the bees did not commence work on it at once, before it had a chance to warp or twist about in the hive. It is best to give brood foundation to bees only at such times as they are wanting more combs; for unless they do so want, they will not be touched by the bees, unless, perchance, to mutilate them, because they have nothing to do except mischief. But, having combs as described, there are two ways of fixing them fit for use by the bees. The first is by melting them up and working over into foundation again—a plan recommended by some of some of our most advanced bee-keepers, but a wasteful plan, as I consider it, unless the combs are too crooked; and, secondly, straightening them in the spring of the year when pretty much free from brood or honey. Take them from the hive to a warm room—one whose temperature is up to 90 or 100 deg., and, when thus warm and pliable, lay on a flat surface and press them in conformity to that surface, cutting out a little strip of comb if necessary, where the worst bulged, so that the combs will come straight without spoiling too many cells by pressing them out of shape. Years ago I straightened hundreds of combs in this way, before foundation was known, so that the combs in all of my hives were as straight as a board.

2. *Compelling bees to build combs.*—"Is there any way to get bees to build comb when they are disinclined to do so? I fed some colonies until all the vacant comb was filled, but they would not build out the foundation. This has reference to the brood-combs exclusively."

I do not see why you failed here, unless your foundation was adulterated; for in all my experience in feeding the bees would work

foundation as soon as they began to secrete wax to lengthen out the cells or cap over the feed; but had the bees been persistent in using the combs in the hive rather than work out the foundation, you could have made them work it by taking their combs away from them and giving nothing but foundation. In this case they would have to work the foundation in order to find a place to store the feed, after they had they had their honey-sacs well filled.

3. *Balling queens.*—"What is your remedy where bees ball a queen? Why do bees ball a queen of their own raising, after all queen-cells have been destroyed, and they can have no hope of any other queen?"

The last part of this is a mystery that I never could really solve. It is easy to say that, in opening hives, the bees fear that their queen is to be injured, so ball her for safe keeping; but I have known scores of instances where a virgin queen has been balled in coming home after meeting the drone, and at other times, till they were killed, or nearly spoiled for future use, being led to the discovery that the queen was being balled by the general appearance of the colony at the entrance, such as an unusual commotion denoting queenlessness, or doubled-up bees having the appearance of being stung. Who can tell why such balling occurs? The remedy is the same as in introducing queens—that of caging them till the bees behave themselves and are peaceably inclined toward them. Smoke the bees till they release the queen, then cage her and leave her till the bees pay no more attention to the cage than they do to any other part of the hive. When you find this to be the case it is always safe to let any queen out.

4. *Upward ventilation.*—"Do you believe that bees know better than we what is best for them? If it is best for them to have upward ventilation, do you not suppose they would provide therefor instead of sealing everything up tight?"

I have my doubts whether bees know what they want along this line, but accept the surroundings as they find them. It is their nature to seal up all cracks and holes not large enough for their exit or return, and this they will do, no matter whether in a tree or hive; but after seeing them prosperous in trees that had only a hole large or small at the bottom of their combs, and all the way from there to a crack large enough to put your hand in the whole length their combs occupied in the tree, I have concluded that they accepted things as they found them, as said above, without asking whether such were best for them or not.

5. *Beeswax and propolis.*—"What is the difference chemically between beeswax and propolis? Is propolis a special product of the bee, as wax is? Do bees consume anything to produce propolis?"

Beeswax is a fatty substance peculiar to the bee, and produced by the consumption of honey, on a plan similar to animals, such as the hog and cow, consuming grains of various kinds to produce lard and tallow, the same being of a fatty nature, but differing from beeswax to a considerable extent. Who can tell us more on this subject? Regarding propolis, bees do not produce it at all, but simply gather it from the resinous exudations of certain plants or trees, and from old hives, &c., where it has been previously placed by other bees. The tree known as the Balm-of-Gilead and the horse-chestnut give the most of the propolis gathered here, the buds being well covered with this resin during the greater part of the summer season.—*Gleanings.*

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column. Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

J. PEARMAN (Derby).– We thank our correspondent for promising to bring the matter before the Committee of the D.B.K.A., and will be glad to have the views of the Committee of the D.B.K.A. on the subject referred to, and in the meantime it will be well to let the matter rest, as only interesting to those immediately concerned.

JOS. HARRISON (Keighley). — *Bee-Candy.* — The candy has not been quite properly made, and in consequence it is too hard, partaking more of the nature of "hardbake" than soft candy. It must be kept constantly stirred while cooling. Honey is full of minute air-bubbles, and seems slightly predisposed to ferment. It would hardly be fit for sale unless re-melted.

THOS. HUGHES.—Inquiries intended for the British Bee-keepers' Association must be addressed to the Secretary, Mr. J. Huckle, King's Langley, not to the Editors of the BEE JOURNAL. We shall be very pleased to insert the particulars noted in P.S. if sent us in the form required for our Correspondence Column.

E. H. P. (N. Devon).—*Buying Bees, and best kinds to keep.*—1. Excepting for the difficulty of making a thorough examination of their condition, the present is an excellent time for purchasing stocks of bees. 2. Our personal preference is for a good strain of black bees, and we advise your beginning with that variety.

G. BROOKS (Collumpton).—No trace of foul brood in comb sent. Bees are the ordinary kind.

Articles from Peter Bois, A. Wolfe, and C. Harvey are in type and will appear next week.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

(*Continued from page* 83.)

CONVERSAZIONE.

A numerous company had assembled when the proceedings commenced at 6.30, the Rev. F. T. Scott presiding.

There being no "paper" to be read or set subject for discussion, and as several novelties in the shape of new bee-appliances had been sent for the inspection and criticism of those present, the Rev. Chairman called upon Mr. W. P. Meadows to explain his new method of wiring frames, which he had no doubt would be of interest.

Mr. Meadows said it was generally considered advisable to use wired frames for brood-chambers, and he had constructed a frame fulfilling that requirement, in which the wire could be easily fixed, and which was stronger, he thought, than most others he had seen. A specimen thereof was handed round for inspection. The improvement consisted in the adaptation of tin to wood. Along the top was a tin girder, shaped to fit between the split bar, and along the bottom another was placed. This tin contrivance was slotted in three places, so that the wiring could be done very rapidly. The wire was tied in one place and then threaded round, and, if done diagonally, the frame was rendered very rigid and strong and capable of bearing a much heavier weight than would ever be required of it. The wires, of course, became embedded in the foundation. There was another circumstance he ought to mention. The tin arrangement could be easily adapted to frames already in use.

Mr. Carr thought the plan of wiring as described an admirable one; the wiring could be done so quickly. It might be interesting, now that Mr. Meadows' frame was being examined, to inspect a frame sent by Mr. Howard, in which the older method of fine wire nails driven through the side-bars, and bent in the form of hooks, were used.

Mr. Till liked Mr. Meadows' frame, but feared the expense would tell against it.

Mr. Cowan thought the cost was, of course, a consideration in the matter; but an important question was whether so much metal in the hive would affect the bees. The lower part of the bar would be in direct contact with the air, and the tin would attract the cold. He did not think so much wiring was necessary as was used in either of the specimens (Mr. Meadows' or Mr. Howard's). There was always a danger that the wires would not become properly embedded, as was the case in one of the samples before him. The wire must be entirely covered over with wax to make it certain that brood would be raised in the cells through which the wire passed. The girder at top and bottom was an excellent plan theoretically, but with eight or ten of such bars in a hive it appeared to him there would be too much metal, and consequently too great cooling space.

Mr. Hooker pointed out that the frame before them had an advantage over most other wired frames in that it was not likely to buckle at the bottom and sides.

Mr. Meadows said that the bottom bar might be made a smaller section of a girder, and be covered with wood if the tin surface was considered objectionable.

Mr. Baldwin thought that the method introduced was calculated to strengthen frames, but the question arose, was it necessary to have wired frames at all? His contention was that they were unnecessary, and he believed that if the ordinary frame, as well as the extractor, was properly made there was no difficulty in extracting honey. Besides, if inferior wax were used with the wired foundation, the heat and weight of the bees would cause the cells to stretch and alter their shape for some two or three inches down, and become oval instead of hexagonal. The result of this was that no brood would be found there. He would say, in spite of the Americans, the less metal or wire in the hive the better.

Mr. Baldwin, in answer to remarks by Mr. Carr, said that Mr. Root's frames were nearly all wired, but that from his observation of American methods he was not in favour of their adoption by British bee-keepers.

Mr. Cowan, as an old bee-keeper, did not require wired frames for his own use, but he thought them necessary for many bee-keepers. At examinations he had seen people taking frames out of a hive covered with bees and brood, and turning them over in such a way that but for the wiring the comb would have tumbled out. There was also an absolute necessity for wiring frames when the large American and Swiss ones were used. There was a convenience in the wired frames even for an expert, because he could work much more rapidly when not compelled to take extra care lest the combs should fall out, which was very likely if they were new and the weather warm.

Mr. Carr submitted that the question was not whether wiring was necessary or no, but whether, admitting the desirability of it (upon which he thought the majority of bee-keepers agreed), Mr. Meadows's plan was not an improvement on other inventions. He questioned whether the objection to the metal bottom-bar (which could be covered in) was not more than compensated for by the extra rigidity of the top bar and the frame generally.

Mr. Hooker thought that if a bee-keeper had plenty of time, and only two or three hives to manage, he might do without wire, but where quick extraction was required wiring was a great advantage. As it was the custom to

leave the entrance of the hive open in most instances during winter, and the bees were all clustered above, he doubted whether there would be the difference of temperature referred to by Mr. Cowan.

Mr. Meadows would like to ask Mr. Baldwin whether he had not recently had an immense number of inquiries for wired frames. Certainly 25 per cent. of the applications made to him (the speaker) were for wired frames for brood-chambers. Mr. Baldwin had said that if good wax were used there was no necessity for wiring, but he believed that however good the wax was there was a danger of it going out of shape if not wired.

Mr. Baldwin replied that during the whole of the previous year he did not have a dozen inquiries for wired frames, and eight of such customers would not adopt them after the objections thereto were explained.

Mr. Meadows also showed a box or crate of shallow frames, to which was affixed the new "wide-end" used for the purpose of securing thick combs in surplus chambers for extracting. After thorough examination, the new "wide-end" seemed to meet with general approval.

Mr. Carr next exhibited for the inspection of the meeting a shallow-frame box, sent by Mr. Howard, fitted with the recently-introduced "J.H.H." frame, and observed that the sight of this reminded him of his objection to uncapping comb in wide frames.

Mr. Cowan said the frame in question was an adaptation of one originally brought out nearly twenty years ago in America by Nellis and Hoffman. Mr. Abbott introduced it into England. He (Mr. Cowan) had given it up, because in using it he could not uncap and extract without difficulty. Another reason was that it was apt to cause bee-crushing in unskilful hands. It was not worth while, in his opinion, for English bee-keepers to follow the Americans, who were rather apt to rake up old, tried, and discarded patterns of frames as though they were new, and their own ideas. He did not consider they were, in this respect, as far advanced as in this country, and as regarded appliances, he thought England could hold her own.

Mr. Hooker agreed, but remarked that his recent visit to the States had proved to him that Americans had one inestimable advantage over British bee-keepers in the immense area of flowers at their disposal.

Mr. Baldwin admitted the truth of that. He had seen hundreds of miles of plants and flowers suitable for the production of honey. English bee-keepers could not compete against such advantages. The Americans seemed always in a hurry, and they cared nothing about destroying a few bees if time were saved thereby.

Mr. Carr then exhibited a new smoker, sent by a Bedfordshire bee-keeper, and Mr. Cowan explained the principle thereof, from information supplied by the inventor. He said that the inventor claimed superiority for his contrivance over other smokers because the latter failed to distribute the smoke sufficiently over the hive. The circular opening, it was contended, only permitted a portion of the smoke to be utilised. His (the inventor's) plan was to have four openings in a flat nozzle, by which a wide, thin layer of smoke was emitted, and if the smoker were held a certain distance from the hive the smoke spread out and was more effective. There was also a valve of peculiar construction which prevented any of the smoke finding its way into the bellows, and another arrangement which stopped any escape from the joints. He (Mr. Cowan) considered the specimen too heavy, but possibly that defect could be remedied. The apparatus could be cleared out by blowing through it. It was used in the reverse way to the ordinary smoker, viz., with the bellows uppermost.

The smoker was tested before the audience, and Mr. Cowan said he thought the same effect could be gained by using an ordinary smoker with a flattened nozzle, although there might be features in the invention which he did not understand.

In fulfilment of the promise made in an editorial footnote on page 488 of B.J. for December 7 last, Mr. Carr next exhibited the hive to which reference is therein made, and which was sent to the meeting for the purpose of illustrating "a new method of hanging frames," devised by a reader of this journal. In it the frames hang on a metal runner with slots $\frac{7}{8}$ in. wide, in which the top-bars rest. Fixed to the hive sides are also zinc angle-pieces, having bee-space openings on the three face sides; the said angle-pieces being of sufficient width to fill the space between the side-bars of each pair of frames. By the means employed the frames are made perfectly rigid, while allowing the bees to pass from one comb to another through the bee-space openings referred to.

After full examination it was soon seen that, although ingeniously contrived, the "new method" was altogether unsuited to the handling of frames necessitated by ordinary manipulations. The rigidity entirely prevents lateral movement of the frames, and thus makes it imposible to obtain the space necessary for lifting out a comb from a crowded hive. This was the view held by all present.

Mr. Meadows next showed an extractor made on the plan of the "Cowan Rapid," and brought mainly for Mr. Cowan's inspection. Last year an appliance dealer in this country had imported several extractors made and sold in America as the "Cowan Rapid," and the one before them was in some respects an exact copy thereof. He (Mr. Meadows) had, however, made the cages to take out and the top to take off, and sections could be extracted as well as ordinary frames, these alterations constituting, as he thought, valuable improvements.

After the machine had been inspected by most of the members present, and the working

of it illustrated, Mr. Cowan said he would like to express his approbation of the improvements therein, all of which he thought would be advantageous. The girder on each side of the cages tended to strengthen them, and got rid of a weakness which had always existed. The other parts were light, and seemed well and substantially made, and he could not object to the appliance carrying his name. That extractor has recently been bought out in America by Mr. Root. He (Mr. Cowan) had originally designed it as far back as 1874 or 1875, and after a lapse of seventeen or eighteen years the machine was introduced and declared now to be the best in the market, though he was bound to say Mr. Root had honourably coupled his name with it.

At this juncture the Chairman was obliged to leave, and Mr. Cowan moved a vote of thanks to him for presiding. He remarked that Mr. Scott was a very old friend of the cause, and he was sure one and all regretted his retirement from the Committee owing to advanced age.

The motion having been carried, the Chairman expressed his thanks, and said he hoped to be able to come to the meeting another year, although, when a man reached his eighty-second year, he had better not make promises. His interest in bee-keeping was, however, as keen now as thirty years ago.

A conversation then ensued respecting labels for honey bottles and shop placards, which it was proposed should be prepared for the use of county associations in furtherance of the sale of certified English honey. Mr. Till showed a specimen ornamented placard and label, but said that he was afraid unless some of the Associations combined to order a large supply of the former, it would be impossible for any single association to bear the expense of producing the same. He did not see why one style of placard should not be adopted by all the counties; the only alteration needed being the county name for each. The labels might be sold to members at a profit. He thought if the plan could be adopted throughout England, the advantages to the different associations and British bee-keeping were obvious.

Mr. Woodley feared the outlay involved in producing such an ornamental window-bill would be too formidable for the Associations. In Berkshire the local branch had a limited number of agents—about thirty perhaps—and it could not be expected that shopkeepers would consent to show more than one of the placards. That would mean a large amount of dead stock on hand. A framed certificate, if adopted by the counties, would involve far less expense. Perhaps the B.B.K.A. might provide something of the sort, and make a charge for it.

Mr. Cowan, in reply to the latter suggestion, said that the funds of the B.B.K.A. were not in sufficiently flourishing a condition to permit of such outlay.

Mr. Till admitted the difficulties in the way of his proposal, but hoped the Associations would combine and see their way to surmount them.

The proceedings terminated with the usual votes of thanks.

NOTTINGHAMSHIRE BEE-KEEPERS' ASSOCIATION.

The annual general meeting of the Nottinghamshire Bee-keepers' Association was held on Saturday, February 17, in the People's Hall, Heathcote-street, Nottingham. The President, Viscount St. Vincent, occupied the chair, and there was a good attendance.

The Secretary read the annual report, which it is gratifying to note recorded an increase in the membership, the numbers being 203 against 195 in the same period of 1892. It was matter for regret that the accounts showed a small balance due to the Treasurer, owing, it was thought, to the fact of many members paying cottagers' subscriptions who really were not cottagers in any sense of the word. The committee hoped the members referred to would recognise the necessity for altering this state of things, and avoid the need for a curtailment of their present privileges, which must otherwise result. He (Mr. Pugh) was glad to say that several members had already increased their subscriptions from 2s. 6d. to 5s. After detailing several matters connected with the past season's honey results and the various shows held by the Association, the report concludes with some particulars of the bee lectures given under County Council auspices which have already appeared in our pages.

The Secretary stated that an intimation had been received from the British Bee-keepers' Association that the silver and bronze medals would be withheld through 1894 on account of financial considerations.

The Chairman said that if the British Bee-keepers' Association would let them have the medals on paying for them he would be glad to pay for them.

The report was then unanimously adopted, and the Secretary was asked to communicate with the B.B.K.A. on the matter referred to by the Chairman.

The Secretary then presented the annual financial statement. They had 132 subscribers of 2s. 6d., and only 45 of 5s. The amount received in subscriptions was £38. 13s.; donations to prize fund, £32. 2s. 6d.; these, with other items, including £2. 17s. 2d. balance due to the Treasurer, made up total receipts of £80. 11s. 11d.; £33. 7s. was expended in prizes, and on the year's working there was a loss of £1. 8s.

The Chairman said they had expended practically the whole of their money among the members of the Association. They had given £33 in prizes against £23 last year. Of course it was an unfortunate thing to have a little

debt, but, as a matter of fact, it was quite as good for themselves as having a big balance in hand.

The balance-sheet was then passed, with a vote of thanks to the Auditor (Mr. Scattergood), who was unanimously re-elected.

Messrs. Pugh and Scattergood were appointed to represent the Association at the quarterly meetings of the British Bee-keepers' Association. The following officers were elected :—President, Viscount St. Vincent; Vice-Presidents, the Duke of Portland, Lord Newark, M.P., Mr. J. E. Ellis, M.P., Ald. S. H. Sands, the Rev. Watkin Homfray, Mrs. A. H. Chambers, and Mrs. J. Hind. Committee—Messrs. J. Baguley, M. Lindley, S. W. Marriott, W. Poxen, J. T. Faulconbridge, J. Finn, H. Merryweather, C. Forbes, J. Rawson, sen., T. Miller, W. H. Webster, G. Wood, and the District Hon. Sec., Hon. Treasurer, and Secretary, M. A. G. Pugh.

The business part of the proceedings terminated with a vote of thanks to the Chairman.

Afterwards the members sat down to a meat tea, and this was followed by a lecture by Mr. J. H. Howard, on "The Two-Queen System" and "Marketing Honey," Mr. P. Aulsebrook, of Woollaton, presiding. The medals and certificates won by the members during the year were distributed, and the annual prize-drawing took place.

LANCASHIRE AND CHESHIRE BEE-KEEPERS' ASSOCIATION.

The annual meeting of the above Association was held on Monday, the 26th inst., at 20, Sir Thomas'-street, Liverpool, Mr. Wm. Tyrer in the chair, among those present being the following members :—Rev. E. Charley, Dr. Jones, Mrs. Firth, Messrs. J. A. Bally, W. Lees McLure, G. Roberts, J. Bell, E. Kinner, G. Rose, J. Rogers, W. J. Anstey, J. Lamb, and T. D. Schofield.

Letters of regret for non-attendance were read from the Rev. J. F. Buckler and G. W. Carr.

After the minutes of the last meeting had been read and approved, the report and accounts for the year 1893, as printed, were passed.

Votes of thanks to the Committee and Officers, Hon. Auditor, and Mr. Kinner for kindly placing a room at the disposal of the Association for holding its meetings in were also passed. Election of officers for the ensuing year then took place.

A letter was read from Lord Lionel Cecil, resigning the office of President, owing to his leaving Lancashire to reside in the South of England. A vote of thanks was passed to Lord Lionel for having kindly acted so long as President, and it was resolved to ask the Earl of Derby, or some other member of the Derby family, to take his place.

The following officers were elected :—Hon. Secretary, Dr. Jones, Freckleton, near Kirkham; Hon. Treasurer, T. D. Schofield, Alderley Edge; Hon. Librarian, Ed. Kinner, 20, Sir Thomas-street, Liverpool; Hon. Auditor, F. H. Handy; Expert, Mr. W. Jones Anstey. Committee—J. A. Bally, J. Bell, G. Roberts, J. Lamb, G. Rose, J. Rogers, W. Tyrer, G. P. Mulock, J. E. Scotson, and W. H. Forde.

Mr. T. D. Schofield proposed that the Association should adopt a honey label for the use of its members, on the same lines as followed by the Berks B.K.A. After some discussion it was resolved to do so, details to be left in the hands of the Committee. A discussion then took place regarding the propriety of using the life-members' fund to pay off the Association's liabilities, but it was decided that there was no immediate need to do so, and that the fund should be reinvested in the Post Office Savings Bank, in the names of the new Chairman and Treasurer. After a vote of thanks to the Chairman the meeting concluded.

SPECIAL NOTICE.—All communications to be addressed in future to the Hon. Secretary, L. and C. B.K.A., Dr. Jones, Freckleton, near Kirkham, Lancashire.

The Hon. Treasurer, Mr. T. D. Schofield, Oakfield, Alderley Edge, Cheshire, will continue to receive subscriptions.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see* 1*st page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

DO BEES HEAR?

SOME EVIDENCE THAT THEY DO.

[1779.] The question as to whether bees have the power or not of hearing has appeared from time to time in the pages of the BRITISH BEE JOURNAL, and several writers have expressed it as their opinion that bees *can* hear; but no one has advanced any fact in support of that assertion that could be held as a proof. Indeed, not further back than in the number for July 20 of last year (1496, p. 284), the Rev. E. Bartrum gave a challenge to readers

which has not been taken up. He said :—"Who, for instance, can fully explain the question whether bees are capable of hearing sounds, and will dare to dogmatise upon it? I have no doubt whatever but that they are quite capable ; an opinion, however, is quite distinct from a proof." Bee-keepers were too busy to reply to such a knotty query just in the midst of so honeyed a summer as the last ; such a difficult question can only be answered in the quiet months of the year.

But it is not only in these islands that a solution of this question seems to be of interest. Even in America, where one might think bee-keepers would be concerned only with such subjects as those that mainly deal with means of increasing the yearly honey-yield of the hives, we find that some are also interested with questions of such little import, from a business point of view, as to include the one here dealt with. Thus, in *Gleanings* for December 1, 1893, page 882, Mr. W. P. Root says :—"To-day the efforts of bee-men are directed almost entirely to the management of the bee, with the view of getting the most honey ; and in this respect our bee-books present a complete and refreshing contrast to the old ones I have described. True, there are some things about which we should like to know. For instance, do bees hear ? . . ."

Now, my object in writing this article is to show how, under certain conditions, we can obtain proof that bees *do* hear, and also that their power of hearing is in some particulars both sensitive and highly developed. I shall in my observations deal only with noises and sounds with which bees are familiar, and which are of such import as to be of incessant use to the individual bees of a hive.

If bees are shaken from the frames of a hive in separate lots on to different parts of the floor of a dark room, the queenless portion will generally end by moving towards the particular one that contains the queen and join with it, and however much that lot may be displaced on the same floor, the bees from the others will invariably move towards it. In this case the whole of the bees dealt with have precisely the same smell, so that we are led to infer that it is through some other faculty than that of scent by which they direct themselves towards the queen. And we are led to consider whether it is not possible that the bees may hear the movements, however faint, of the queen among the noises produced by the several masses of moving bees.

Something similar presents itself if we place several nuclei, each with a virgin queen, into different compartments of a long hive, on the same floor-board, where the bees have facility to traverse over the alighting-board from one nucleus to the other. In this case matters will go on all right until the young queens are ready for mating ; but at this time some of them will commence piping, and will become so excited that the bees at last will interfere, and destroy all the queens excepting one, when piping ceases, and the remaining queen, no longer disturbed by hearing the movements of her rivals, will get fertilised in the ordinary way. In the case just cited, and although nuclei are quiet compared to large colonies, yet we have no positive proof that each young queen can hear the movements of the other in the adjoining compartments on the same floor-board, but the result tends to convey the idea that it is so.

Another case sometimes experienced is when we have supposed that all queen cells but one have been removed in a colony having several racks of sections tiered above excluder zinc, and about the time we expect the young queen to get fertilised we hear her piping ; we therefore remove the section crates, pile them on a board, and we carefully examine the frames, but fail to find more than one queen. We then examine the sections, and among those in the top rack find a second virgin queen. In this case which I have personally experienced, it seems that the most probable means by which the young queen in the body of the hive had cognisance of a rival overhead was by the sense of hearing.

I was once called to hive a large swarm that had clustered against some palings. The weather was exceedingly hot at the time, and the bees were dispersed over a large part of the surface of the palings ; they also occupied the greater part of the exterior surface of an empty cask which stood close by. The cask was closed ; but the bees had discovered by some means that the interior of the cask was hollow and empty, and several bees were actively occupied in nibbling at the bung, and also at other weak parts, to gain an entrance. Finding the queen, I placed her in a match-box, and took her away with me while I prepared a frame-hive for the swarm. When all was ready, half-an-hour later, it was evident by the excitement of the bees that they had missed their queen, and it was also evident that, although the swarm was spread over an enormous surface on the barrel and fence, yet every bee composing it appeared to know by some means that the queen was no longer among them. It is difficult to conceive that this could have been by any other means than a sense of hearing permitting the bees to distinguish the sound produced by their queen apart from every other.—PETER BOIS, *Jersey*.

(*To be continued.*)

HONEY.—ASSOCIATION LABELS.

[1780.] At the present time, when so much attention is being paid to foreign honey and the sale of own English product, any scheme by which our sale of honey is benefited, or seems likely to benefit, is worthy of consideration.

Like most agricultural produce, there is a danger that honey of British gathering will find the market some day practically swamped

by the importation from foreign districts of such quantities of honey as will, from the lowness of its price, appeal to the purchaser's economy.

At the same time, forewarned is forearmed, and co-operation in this matter is of the most vital importance.

The ordinary purchaser will prefer English produce to foreign if he be sufficiently educated in the matter to be able to judge by his own knowledge which he is purchasing. It, therefore, is essentially necessary that in some manner a distinction should be drawn in the outward appearance of vessels containing English or foreign honey.

I have met enthusiasts who contend that all foreign honey should be plainly marked with the name of the country from which it comes. This is open to the serious disadvantage of being difficult to arrange, and also might even in time prove an advertisement to any brand or wholesale bottlers who, by judicious advertising, might secure the public approval. In many country districts foreign honey is preferred by both the grocer and consumer, because it is properly bottled or tinned, and the villagers, who keep bees by the principles laid down by their ancestors, cannot or will not offer their honey in a convenient form.

If every association would adopt a stringent set of rules for the guidance of its members, and advocate the use of a special label which carried with it a guarantee of purity, the honey offered by the members of the association would reap the benefit of the advertisement of this label.

At a general meeting of the Taunton and District Bee-keepers' Association, held last month, a form of label was unanimously adopted, and a supply of this label will be kept in hand by all local hon. Secretaries, who will sell the same at practically cost price to any member of the Association residing in their respective districts.

Before parting with the labels the hon. local Secretary will fill in the number of the apiary. This number agrees with the number of the card of membership held by the member who wishes to use the labels.

Each member will also be called upon to agree in writing to the following rules :—1. The labels are to be used for super honey only of good quality. 2. The labels are to be affixed to the sections or vessels containing the honey before such sections or vessels pass out of the member's possession. 3. The labels shall not be used for honey taken from any hive which has been sugar-fed subsequent to the placing of supers. 4. That in case of complaint the honey in dispute shall be referred to a sub-Committee of the Taunton and District Bee-keepers' Association, with a right of appeal from their decision by either vendor or purchaser to the analyst of the British Bee-keepers' Association, conditionally on the appellant defraying the costs of such analysis should the decision be against him ; and in case the decision as to the quality of the honey be adverse to the vendor, he shall defray the cost of the inquiry, and shall refund to the purchaser the amount paid by him for the honey in dispute.

Before issuing these labels this season we intend to fix the amount of penalty liable under Rule 4 ; this amount will depend on the analyst's fee, to be ascertained.

The date of sale on the label is left to the member to fill in ; it is suggested that he should write in this date as he parts with his honey. It will be noticed that the guarantee goes direct from the Association to the general public ; it is hoped by this means to create a demand for British honey on the part of the purchaser.

Such in general outline is the scheme by which we hope during the coming season to promote in Somerset, not only the sale of honey, but also the sale of our members' honey. As this is the first year we are testing it, doubtless modifications and improvements will suggest themselves during the summer.

The label will be a plainly printed one, and is intended to be used, not as a honey label merely, but as a "guarantee label." Members will be at liberty to use any picture label that best suits their requirements in addition to this label, and no member is compelled to use the guarantee label if he prefers not to. By bringing the matter into public notice through the courtesy of the editors of the local papers, however, it will, I hope, prove a distinct advantage to such members who will submit to our stringent but wholesome regulations.—ALF. WOLFE, *Hon. Sec. Taunton and District B.K.A., February 23.*

THE "W.B.C." HIVE.

(*Concluded from p.* 87.)

Some may think that the "W.B.C." hive, with its many separate parts, is not suitable for transport to the heather. This is how mine is arranged to make what I think is a good transport hive :—Four screws hold the body-box firmly to floor-board. The super-boxes are fastened to one another, and to the body-box by Van Deusen clamps, one on each side, while two wood buttons, like those shown on the illustration of the Eke, fig. 11, are fixed to each end to keep all in position. The outer cases I propose to place in position, and strap round with a strong tape and buckle. The buttons, when raised into position, bear against a ledge of wood on the bottom ends of the box above, which does not appear in the illustrations (figs. 5 and 6), but which I should think is an important part of the boxes, and not an exceptional adjunct in my hive. It joins up the projecting bottom parts of box sides as they appear in figs. 5 and 6, makes the bottom surface of box to completely cover top surface of lower box, thus covering the frame ends (which otherwise would be exposed, and

lose heat through the tin ends), and making a joint with the end strips enclosing the frames.

The Van Deusen clamps draw the boxes together so closely that I think they will be useful in general work, if, as I presume, a close joint between boxes to prevent leakage of heat and propolisation is desirable.

My stand fits in closely between the bearers of floor-board, as probably intended, though not quite apparent, in the illustration. This gives a firmer hold of floor-board on stand than if its bearers just rested on the stand. The latter was not the full length which the flat portion of floor-board allows, so I lengthened it, thinking it important to have as large a "leg base" as possible, as shown in the illustration.

In both the old and the new descriptions "zinc angle-pieces" are specified for the runners. Mine are the tin runners, doubled over, and forming thus a slightly rounded bearing-edge, which I notice are shown in Mr. Meadows' catalogue among hive fittings. The tin stands up 7-16ths of an inch above the hive wall. Would you please say whether you consider the zinc angle-pieces preferable, and also whether your experience proves that metal runners have always a decided advantage over bevelled wood runners?

I should be glad of an opinion on an idea of mine to try the experiment of working "W.B.C." hanging section-frames in shallow frame boxes, the advantage being that with *one* set of super-boxes one could work for comb or extracted honey. The shallow frame box being ¾-in. too deep for the hanging section-frames, I would use a slatted frame or grid, to fill up their space, which would fit easily into the shallow frame box and rest on the frames of the lower box. The slats or bars of the grid would be at right angles to the bars of frames they would rest on, and thus, perhaps, act like Mr. Simmins' section-box slats in preventing brace-combs, and making the ascension of the queen less likely where excluder zinc is not used. If this idea be at all possible (and I mention it with diffidence as a novice) it would be better than the inverse method of using a ¾-in. eke with "W.B.C." hanging section-box, to make a shallow frame box, because this is but a makeshift and involves an extra joint.

There is just one point in the "W.B.C." hive which I think I should like different, and that is, if the length for frames were 16 in. or 17 in. instead of 15, my idea being that the disadvantage of the extra inch or two in extra weight and bulk of the hive would be compensated for by the greater ease of manipulation of frames in the brood-nest. As a novice it seems in theory so much easier to manipulate with some spare room in working 10 frames, by removing a dummy or two, than to get out and hang up somewhere the first of 10 frames closely packed and filling the box. Does your experience disprove this idea?

Thanks for your note on my remarks on the length of the new wide ends [1729]. Having now a complete set fitted on frames, I find they are so exactly of the specified length that they go easily into the theoretical span they should occupy with no need for play.—F. S. A Lancashire Novice.

[The reply to our correspondent's question as to allowing extra frame space, appears in our foot-note on p. 87, and was inserted there inadvertently, instead of at end of our correspondent's letter.—Eds.]

PROPRIETORSHIP OF THE "BEE JOURNAL."

[1781.] As Mr. C. N. Abbott was the originator of the British Bee Journal, doubtless some of your readers will be under the impression that Messrs. Abbott Brothers have still a direct connection with its proprietorship. From the tone of your remarks on foreign competition I infer that this is not the case; but a categorical denial of the supposition would, I think, be welcome to many, and beneficial to the Journal. — James Henderson, *Knockbuckle House, Renfrewshire.*

[In expressing thanks to our correspondent for drawing attention to the above, we beg to say that the gentlemen referred to have no more connection with the proprietorship than our correspondent has himself. We thought this fact was generally known to readers.—Eds.]

SPACING FRAMES IN SURPLUS CHAMBERS.

[1782] Last year in report of the "Royal" Show at Chester, you kindly expressed a desire to hear the results of my method of spacing frames by wood blocks or "nuts" which are not of "variable widths," but ⅜-in. long and ⅜-in. square. I may say I have put aside the pieces of wood strung on a wire, preferring the above nut to which a brass screw is so fixed as to run easily in grooves on the sides of hives.

I was successful in securing combs more than two inches thick, when unfortunately I found the bees had got ahead of me and begun to seal the cells. I must, therefore, for the future endeavour to keep the hives on which extra thick combs are being worked separate from the rest, as they require more frequent inspection.

I claim for my method that though it can be worked with other "ends," with a view to producing thick combs—in comparison with them it regulates the frames at more varied distances. Beginning with twelve frames spaced at 1¼ in. and as soon as they are worked out withdrawing two, and so on, until the crate holds only six splendid blocks of honey. So that when ten supers are started with twelve frames each, they become gradually

twelve, fifteen, twenty supers in two or three weeks of a good honey flow. I claim further that the wood nuts are better non-conductors, and keep the temperature of hives more even than the metal ends. I claim also that when once people have tried my system they will know how to get better results with less appliances, *e.g.* :—1. When they can thus produce the handsomest combs they will have no occasion for using sections, for, here I would say, I thoroughly agree with those who have written during the past year in praise of honeycombs in shallow frames, and especially with the report respecting the Chester Show, under Class 340, "Best three shallow frames, &c." :—"Nothing in honey-production can, to our mind, surpass a well-finished shallow frame of good honey. It far exceeds a single section in beauty." And I would add if built extra thick on full-size drone foundation, it surpasses the section in every way, and so I have come to the conclusion that it is time to think of putting aside sections, as the advantage there is in packing them is counterbalanced by the woody flavour they impart when delicate honey is kept in them.

2. I am almost convinced that the bees will winter as well on two crates of shallow frames as on ten standard frames. I intended testing this problem more; and if I find it is so, then the standard frame must go overboard. This move would simplify matters wonderfully in an apiary, for with stock and super-chamber alike there would be required only an outer case such as you have been lately describing, but of course a little stronger—say, floor-board of $\frac{3}{4}$ in. stuff, and the sides $\frac{1}{4}$ in. thicker; for I have often regretted some hives being light, but never when they were fairly heavy and strong.

It only remains for me to warmly invite you to come down here the first week in August and see my apiary, and also accompany me to the Yorkshire Agricultural Show at Beverley, as the Y.A.S. Council have again most kindly granted me two compartments in bee-shedding, and I hope to show in the process of extracting a new uncapping machine at work, plenty of combs worked on full-size drone foundation from a new mill, as well as the bottling of several gross of "globes" (1 lb., $\frac{1}{2}$ lb., and $\frac{1}{4}$ lb.).

Wishing the B.B.K.A. and the Editors of our JOURNAL a prosperous season.—RICHARD M. LAMB, *Burton Pidsea Rectory, Hull.*

Queries and Replies.

[964.] *Fixing Foundation in Shallow Frames.*—I hope this year to make a new departure and produce some extracted honey. Would you be so good as to tell me, 1. How many sheets to the pound of foundation would you use for shallow-frames, and how would you fix it? 2. After extracting from frames, is it necessary to return them to the same hives from which they were taken? 3. Would any harm result from giving the bees the frames back again wet from the extractor? 4. Could you give me a recipe for making white paint for hives? 5. What do you consider the best covering to be used over American cloth?—W. K., *Widford, March* 2.

REPLY.—1. Use the ordinary brood-foundation, which, when cut to size for standard brood-frame, runs six or seven sheets to the lb. These sheets cut in two are large enough for shallow-frames. To fix the sheet insert a small screw-driver, with a point about $\frac{1}{4}$ in. wide, into the saw-cut in top bar of frames on the upper side. A half-turn of the screw-driver parts the saw-cut, and allows the sheet of foundation to be slipped in, and on withdrawal the foundation is gripped, and held firmly in its place. 2. Frames should be returned to the bees after extracting to be cleaned up ready for storing away for future use. 3. They must be always given so. Setting them on at dusk, after the bees have ceased work for the day. 4. The ingredients are :—White lead, boiled linseed oil, and driers, with colouring matter as required. Good paint, ready mixed, may be had for 5d. per lb. 5. We prefer grey felt under-carpeting.

[965.] *Driving Bees from Box-Hives.*—How can I drive bees out of a hive made on the following plan?—The hive is a wooden box, the lower portion being for brood rearing and a set of drawers above for section honey, connected with the brood-chamber by narrow slits cut in the board that divides the two compartments; strips of zinc cut off communication when desired. The only movable parts are the drawers. There is no way of getting the combs out of the bottom box except by knocking the sides or bottom out, which are nailed. I have four stocks of bees, all strong; two are in hives as described above, and two in straw skeps. I am going to introduce bar-framed hives of standard dimensions. I shall not winter more than six stocks. Will you kindly give me your *modus operandi* and the best time to operate?—W. K., *Cornwall.*

REPLY.—There is no means of driving the bees without first removing the bottom of box and reversing it, as is done with a skep. The drawers would have first to be removed, of course.

[966.] *Length of Top Bars.*—1. I have a bar frame hive with standard frames, excepting that the top bar is only $15\frac{3}{4}$ instead of 17 in. long. I wish to transfer into a new hive. Is there any objection to this? 2. What is the reason the top bars are made so long?—ALIQUIS.

REPLY.—1. Provided the new hive is made to take the shorter top bar, there is no objection to its being used. 2. The top bar of standard frame is made 17 in. long in order

that the projecting ends, or "lugs," may reach beyond and outside the hive body, when this enables the bee-keeper to get hold of the "lugs" when handling frames, without having to dip in among the bees at all. The shorter top bar works in a rabbett cut in the hive sides, and is generally used in single-walled hives.

[967.] *Preventing Swarming.*—Which is the best (*and simplest*) mode of procedure to endeavour to prevent swarming? My idea of working is as follows. Am I right, or can I proceed on a better plan? First give the bees room in advance of their needs, to discourage if possible the idea of swarming; but in case of a swarm issuing notwithstanding, to destroy all queen cells, insert a couple of frames of foundation (whole sheets), taking away frames of brood, if necessary, to make room for them, and then in the evening returning the swarm to the same hive. I much wish to prevent any increase of my stock this season, but to concentrate their energies upon honey-gathering.—W. R. B., *Hunts, March* 5.

Reply.—Beyond giving shade and ventilation in hot weather, we can recommend no better plan than the one proposed. See that the brood removed is promptly given to another stock to hatch out.

Echoes from the Hives.

Bovey Tracey, Devon, February 28.—Bees here have come through the winter very well, and are flying very strongly every fine day, most of them carrying in pollen. The weather being unsettled is rather against them. I have wintered thirteen stocks, two of them being driven bees of last August. Besides my own, I am looking after about a dozen hives for others, so I am looking forward to a lively time amongst them soon. Fruit buds seem very plentiful this year again, and, with pears and plum almost bursting, and peach-blossom already out in some sheltered places, we ought to have an early season. I am surrounded by fruit-orchards (mostly apple), and last year had sections off completely full by the first week in May. Hope I shall repeat this in 1894.—Ambrose Godsland.

Beemount, Stoke Prior, Worcestershire, March 3.—Four weeks ago to-day I had a peep into most of my hives to see whether any of the quilts required changing: now this afternoon I partially overhauled five of my stocks to see if stores were getting low. I was agreeably surprised to find there was abundance of food in three of them, and a fair amount in the others. To stimulate breeding, I uncapped some of the combs, and placed a bottle of syrup over the frames of those hives where the stores were not so plentiful. Doubtless several bee-keepers, when they read what I have done, will say I am too early with my uncapping stores and feeding with syrup; but, seeing that apricots have been in full bloom for several days now, and gooseberries are nearly in full leaf, and being desirous of getting some honey from the fruit-blossoms, I thought it advisable to prepare in good time. I did not pull the brood-nest to pieces to see what quantity of brood there was, for I consider it does a deal of harm to disturb the frames at this time of the year.

When I wrote to "our" Journal the other day I said I intended trying S. Simmins' method with two of my stocks, but I regret to say circumstances have since arisen that will compel me to abandon the project for this season.—Percy Leigh.

Death of Mr. C. N. Abbott.

Just before going to press we were much grieved to learn that our old friend Chas. N. Abbott is no more. We hope to give further particulars of his death, and of his life, next week, and in the meantime, on behalf of thousands of bee-keepers who knew and esteemed him, we offer our sincere condolence with his widow and family in their bereavement.

WEATHER REPORT.

Westbourne, February, 1894.

Rainfall, 2·01 in.	Sunshine, 96·4.
Heaviest fall, 33 in. on 17th.	Brightest Day, 9·3.
Rain fell on 15 days.	Sunless Days, 10.
Above average, ·38 in.	Average, —.
Max. Temperature, 53° on 27th.	Mn. Maximum, 44·8°.
Min. Temperature, 23° on 23rd.	Mn. Minimum, 33·3°.
Minimum on Grass, 18° on 23rd.	Mean Temperature, 39·05°.
Frosty Nights, 15.	Maximum Barometer, 30·59° on 4th.
	Minimum Barometer, 29·40 on 11th.

L. B. Birkett.

LECTURE ON BEE-KEEPING.

The Rev. E. Davenport, of the Worcestershire Bee-Keepers' Association, gave a lecture on this subject in the Assembly Room, Bromsgrove, on Friday, the 9th ult., County Councillor Jefferies presiding. The lecture was illustrated by limelight views, which were shown by Mr. C. Harvey, of Stoke Prior. In introducing the lecturer, the Chairman touched upon the importance of the subject, and in the course of his remarks the Rev. Mr. Davenport said bee-keeping was both a profitable and

healthy occupation, and one which the poorest could engage in. He gave the audience practical advice on the selection and management of bees. At the close several questions were asked. County Councillor Parry proposed a vote of thanks to both the lecturer and chairman, and said he came there that evening to see how the grant of the County Council was being disbursed, and he should go away perfectly satisfied with the manner it was being spent, and he hoped bee-keepers in the district would form a local branch to help the labouring classes by practice and precept to become bee-keepers, for he could see the nucleus of much good to those in and around Bromsgrove. The Chairman and the Rev. E. Davenport suitably replied.—COMMUNICATED.

NORTHUMBERLAND AND DURHAM BEE-KEEPERS' ASSOCIATION.

I have pleasure in reporting that a series of six lectures has just been delivered in this district by Mr. G. Wells, of Aylesford, Kent. Three of the lectures were held under the auspices of the Northumberland County Council, and the Northumberland and Durham Bee-keepers' Association was responsible for the remainder. The results have been highly satisfactory to all parties concerned. Thanks to the BEE JOURNAL and *Record*, north-country bee-keepers are more or less familiar with Mr. Wells' system, but the prospect of a personal visit was widely appreciated. The centres chosen were: — Newcastle-on-Tyne, Consett, Whittingham, Cambo, Bedlington, and Riding Mill, and at of all these places the audiences were numerically large and drawn from a wide area, ranging from one to fifteen miles. The first lecture was held at Newcastle, and was reported in your issue of last week.

On the following day the town of Consett was visited, and a very successful meeting was held. J. Winter, Esq., of Leadgate, efficiently discharged the duties of the chair, and bee-keepers were present from Durham City, Rowley, Waskerley, Castleside, Medomsley, &c, a good many of whom joined the Association. The proceedings closed with a vote of thanks moved by Mr. Calvert, of Medomsley.

A meeting was next held at the pretty village of Whittingham, in the centre of the most fertile vale of Northumberland, which appeared to Mr. Wells to be a perfect Eldorado for bee-keeping. The schoolroom was crowded to the doors, and a true Northumbrian welcome was given to the lecturer. At the close the chairman, the Rev. William Shield, joined the Association, together with several other gentlemen who were present.

The other three meetings were held at Cambo, Bedlington, and Riding Mill, and were well attended notwithstanding an inclement change in the weather.

Mr. Wells is to be congratulated upon the complete success of these pioneer meetings. The addresses were admirably delivered, and embellished with homely wit, which kept the audiences in excellent humour. The hives and appliances used for the lectures have been purchased by the Association, and will be in the hands of Mr. McClay, bee appliance dealer, 4, Cloth Market, Newcastle, during the month of March for inspection by members and others.

The Committee hope to follow up the success of these meetings with another lecturing tour, and the following have promised to give their services as lecturers should any meetings be arranged, viz. :— Rev. R. E. Taylor, Councillor F. E. Schofield, County Councillor T. R. Dodd, and Mr. Wakinshaw. The Secretary will be glad to receive applications for lectures from any part of the two counties. Mr. Wells was much gratified with the success of his visit, and has expressed his hearty acknowledgment of the hospitality received on all hands. In leaving the hives, &c, for a nominal sum, he accompanied the favour with a donation of a guinea to the funds of the Association. He has also, in accordance with promises, sent the Secretary seeds of the Chapman honey plant and Melilot clover, which he grows for his own bees, with which members will be supplied on making application,

J. A. KIDD, Hon. Secretary,
1, Havelock-terrace, Gateshead-on-Tyne.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

MR. G. WELLS, of Aylesford, Kent, asks us to make known his very reasonable request that persons writing him for information on what is called the "Wells system of bee-keeping" must in all cases enclose a *stamped addressed* envelope, otherwise he cannot undertake to reply to their inquiries.

"PATIENCE TRIED" (co. Cork). *Disinfecting foul broody hives.*—In such a case we should wash every portion of the hives with a strong carbolic acid solution, and afterwards give two coats of paint—carefully painting into every nook and cranny—before using them again. Burn the frames out of sight. Use naphthol beta for medicating bee-syrup.

W. (Swansea). — Please refer to above for reply.

Several Queries and Letters are in type and will appear next week.

Editorial, Notices, &c.

THE LATE CHARLES N. ABBOTT.

Last week it was our painful duty to mention that our old friend, C. N. Abbott, had passed away, and now we wish to bring before our readers a short sketch of the career of this pioneer of British bee-keeping. There are thousands of bee-keepers still who knew Mr. Abbott when he was entirely engaged in advancing bee-keeping, but there are many thousands now who only knew him by name, and by whom a sketch of his life will be welcomed.

CHARLES NASH ABBOTT.

Charles Nash Abbott was born at Hanwell, Middlesex, on October 5, 1830, and was in the 64th year of his age at his decease. His father was a builder in a large way of business, and a man of high repute and sterling worth.

Early in life, while still a lad, an errant swarm of bees found its way into his father's garden, which, having been hived in a flat-topped skep, having a small window at the back, was a continual source of wonder and delight to the lad. On his return to school his thoughts often reverted to his own stock which, in the ensuing holidays, swarmed and increased into three. These were the dark days of bee-keeping, and the "taking up" of one of these hives in autumn was always a dreary remem-

brance. The day of light, the existence of the JOURNAL, was then far distant.

Many years passed before Mr. Abbott had the opportunity of renewing his acquaintance with bees, but in 1865 his father died, and this event relieved him from business necessities and permitted him to return to the dream of his youth. An opportunity now presented itself of gratifying his thirst for knowledge of the honey-bee. He received an appointment as an officer at the Central London District School at Hanwell, and here he came in contact with the Medical Officer, Dr. Coster, a bee-keeper of note, and an ardent enthusiast of the moveable-comb system. From him Mr. Abbott acquired his first real lesson in advanced bee culture—lessons almost daily repeated and enforced by practical demonstrations. Mr. Abbott was a willing scholar under a patient and able master—one who took nothing on trust, and who insisted on verifying the varied experiences of the leading men of the day. Numerous were the experiments made in hive-construction to test the suitability of the Woodbury, the Langstroth, and the Quinby hives for the English climate. Well do we remember when at a later period the question of a standard frame was discussed, the experience gained was brought to bear upon the subject, and was a great factor in the adoption of the present standard frame. In the experiments alluded to above Mr. Abbott's knowledge of carpentry proved of great service, for the hives were made under his eye, and the merits of each discussed with great earnestness.

Mr. Abbott having now learned "the more excellent way" of bee-keeping, was eager to communicate his new-found knowledge to others not so happily circumstanced. The local newspaper, the *Middlesex County Times*, opened its columns to his pen, and he thus became a ready source of information to all who sought it.

In 1870 Dr. Coster died, when Mr. Abbott, having purchased the doctor's apicultural assets, became a bee-master on a more extensive scale than formerly, and thoughts and aspirations arose in his mind as to whether bee-keeping might not be an industry of national attention. With this idea in view he became a writer in the *English Mechanic*, advocating most warmly the frame-hive system. It was as a writer in this paper that we first became acquainted with Mr. Abbott by name, and gladly welcomed his determination at a later period to provide a special organ for bee-keepers, by the establishment of the BRITISH BEE JOURNAL. By means of his writings in the *English Mechanic* and also in some of the gardening papers, Mr. Abbott laboured in the cause for many months, each day becoming more convinced of the importance of the bee-keeping industry, and surrounding himself with the friends of the honey-bee, in constantly increasing numbers, until he thought that the time had arrived when he could concentrate the whole of his attention on the pursuit, and with this object in view he gave up his appointment at the Central London Schools.

There was no special paper devoted to the science of bee-keeping in this country, though a limited correspondence on the subject appeared in some of the gardening papers. There was, however, no leader of the "party of progress," and Mr. Abbott in 1873 determined to initiate a journal which would give itself wholly to this object. As soon as he made known his object all those desiring progress rallied round him, and the realisation of his project was made certain.

It would be impossible within the limits of this sketch to recite all the difficulties and obstacles encountered by Mr. Abbott in starting the BRITISH BEE JOURNAL. Suffice it to say, notwithstanding the jealousy which was at the bottom of these difficulties, that in time his dominant will and his persevering energy enabled him to overcome every impediment, and we have also reason to rejoice that he held on his way with steadfastness, for no one can deny the immense good which has resulted from the teachings of the JOURNAL. With the establishment of the JOURNAL bee-keeping received a new impetus and fresh developments. One of these was the establishment of the British Bee-keepers' Association in 1874, in a great degree due to the strenuous advocacy of Mr. Abbott in the JOURNAL. This led to the exhibition of manipulations with live bees, the idea originating with

Mr. Abbott. The first exhibition which ever took place in England at which the operations and the mysteries of management of bees were explained was organised by the British Bee-keepers' Association, and took place at the Crystal Palace in 1874. At this exhibition Mr. Abbott was the chief operator and took the foremost place, delighting and astonishing the vast multitudes who attended to witness the operations, and it was at this show that we became personally acquainted with him, having previously only corresponded.

For many years Mr. Abbott served on the Committee of the British Bee-keepers' Association, and always brought to bear his practical knowledge and business capacities on the various subjects discussed. He was also selected to serve on the Sub-Committee of practical bee-keepers and most successful honey producers appointed to consider and report on a standard frame, and in 1880 he and Mr. W. Carr, of Newton Heath, Manchester, were sent by the British Bee-Keepers' Association on a mission to Ireland, which resulted in a great development of the industry in that island. Mr. Abbott continued to conduct the BRITISH BEE JOURNAL for a period of nine years till December, 1892, when he vacated the editorship and proprietorship in favour of the Rev. Herbert R. Peel. As soon as it was ascertained that Mr. Abbott had determined to leave the editorship, a Committee was formed to raise a fund to present him with a testimonial in token of his unswerving faith in his convictions, his patient perseverance, and untiring energy in accomplishing his purposes during his editorship. We and the late Mr. G. Henderson were deputed to make selection of the testimonial, which resulted in the presentation of a handsome black marble dining-room clock, designed after the style of the temple at the foot of the Acropolis at Athens, affixed to which was an inscription-plate stating that it had been presented to Mr. Abbott by a few friends in appreciation of the services rendered by him to bee-keeping.

There is many a bee-keeper still who owes his knowledge of bees to Mr. Abbott's instruction, and who will recollect with what courtesy and patience every question was answered by him. Straightforward in character, he detested anything that was underhanded, preferred to call a spade a spade, and did not hesitate to expose imposition and deceit. With a generous temperament such as his, it is no wonder that he had very many friends. During the whole time that we knew him, although we frequently differed in opinion, we always experienced from him the greatest courtesy, and when the articles of a "Renfrewshire Bee-Keeper" on the Stewarton hive and system appeared we were selected to champion the advantages of the frame hive.

When Mr. Abbott commenced his career as a journalist it had not been his intention to be a manufacturer of hives and appliances, yet the demand for these grew so rapidly that he found it necessary to prepare a home for the industry. The business was established at Hanwell, but gradually grew in extent that it was deemed advisable to remove to Southall, where it has ever since been conducted under the name of Abbott Brothers.

We must not forget the indebtedness of bee-keepers to Mr. Abbott for his varied improvements in hives and appliances during the time he was Editor of the BEE JOURNAL; these form a history in themselves, and the annual catalogue sent out by the firm bears ample evidence of his work. Amongst these inventions the most ingenious and conspicuous are his Little Wonder extractor and his Combination hive, both of which are largely used.

With the exception of writing occasionally to the BRITISH BEE JOURNAL, Mr. Abbott had, in consequence of failing health, retired for some time from the bee-keeping world, as well as from other active work; for it must not be supposed that he took no interest in other matters. When the Volunteer movement was introduced into Ealing, he was one of the first to join it. For some time he was Poor Law Guardian and Chairman of the Brentford Rural Sanitary Authority. Then he was instrumental in raising funds for building Trinity Church, Southall. By these and other acts he will be remembered and missed by his neighbours; but it is with his bee-keeping career that most bee-keepers will be interested. Since the BEE JOURNAL was started many pro-

minent bee-keepers have passed away, but none whose names will be so closely connected with the progress of the industry in this country as that of Mr. Abbott.

It was only three weeks ago that we proposed, at the annual meeting of the British Bee-keepers' Association, that Mr. Abbott be elected honorary member of the Association in consideration of his valuable services to bee-keeping. As there were a great many new bee-keepers present, we explained what a debt of gratitude these beginners owed to Mr. Abbott, little thinking that while we spoke our old friend was lying on his death-bed, where he had been already for seven weeks, suffering from a painful and lingering illness. His strong constitution enabled him to battle with the disease, although for several weeks it had been manifest to himself and his sorrowing family that recovery was impossible. Although the distinction desired to be bestowed upon him was too late, it marks the honour and esteem with which he was held when it was known that the proposition was passed with acclamation.

We feel to have personally lost a friend, and we are sure that we express the feelings of thousands of bee-keepers in offering our heartfelt sympathy with the family in their bereavement.

BRITISH BEE-KEEPERS' ASSOCIATION.

The first meeting of the Committee elected for the ensuing year was held at 105, Jermyn-street on Wednesday, the 7th inst. There were present Mr. Jonas, Mr. Garratt, Mr. Till, Mr. Carr, Mr. New, Major Fair, and Mr. Hooker (*ex-officio*). John Huckle, Secretary.

Mr. H. Jonas was voted to the chair. Communications were received from Mr. Cowan, Rev. G. W. Bancks, and Captain Campbell regretting their inability to be present. The minutes of the last meeting were read and confirmed.

It was unanimously resolved, "That the Committee, having learnt of the death of Mr. C. N. Abbott, desires to place on record the sense it entertains of the great loss the Association and bee-keepers generally have sustained in the death of that gentleman." The Chairman was requested to convey to Mrs. Abbott and family the sincere sympathy of the Committee with them in their great bereavement.

It was unanimously resolved that Mr. T. W. Cowan be elected Chairman, and Mr. H. Jonas Vice-Chairman for the ensuing year

Sub-Committees were appointed as follows:—1. Finance. 2. Exhibitions. 3. Educational. 4. Northern and Southern Affiliated Association.

The monthly meetings of the Committee were fixed to be held on the second Thursday in each month, August excepted. The following fixtures were also decided upon, viz.:—Thursday, May 10.—First-class examination to be held in London.

Tuesday, June 26.—Examination for third-class candidates, to be held in the showyard of the Royal Agricultural Society, at Cambridge.

Second-class examination to be held on Friday and Saturday, October 26 and 27.

Letters were read from the Secretary of the Notts Association in reference to the decision of the Committee (and subsequently confirmed by the general meeting) requiring the affiliated Associations to make an extra payment for medals and certificate if offered for competition during 1894, and the adoption of the recommendation made by the Northern Associations in regard to an increased payment in entrance fees by candidates when competing for first, second, and third class certificates. The Secretary was requested to inform the Notts Association that the Committee had given much consideration to these matters, and that in their recommendations they had endeavoured to minimise as much as possible the difficulties the Notts Association supposed would arise in the arrangements which had been made. Mr. P. Scattergood, jun., representative of the Notts Association, was approved as an *ex-officio* member of the Committee.

The prize list for the Bee Department of the Royal Counties Agricultural Show, to be held at Canterbury in June next, was resolved upon and ordered to be circulated.

The following new members were elected, viz.:—Mr. P. Sexton, Ballyclough, Ireland; Mrs. R. Scott, Claygate, Esher; Mr. E. B. Gunyon, North Cray, Kent; Mr. W. R. Lilly, Lincoln; Mr. G. Franklin, Ryton-on-Dunsmore; Mr. J. W. Lowry, St. Melions Cornwall.

BERKSHIRE BEE-KEEPERS' ASSOCIATION.

The annual meeting of the above Association was held at the Victoria Café, Reading, on Wednesday, the 28th ult. Among those present were Mr. Councillor Parfitt, J.P., Messrs. A. L. Cooper, T. Flood, D. Kennedy, Kingham, W. Long, Williams, and the Hon. Sec. (Mr. A. D. Woodley); also Mrs. R. Tompkins and Miss Benham, of Goring. The minutes of the previous meeting having been read, the election of officers for 1894 was proceeded with. The President and Vice-Presidents were re-elected, with the addition of H. Vansittart Neale, Esq., of Bisham Abbey. Mr. A. D. Woodley was re-elected Hon. Sec., and on account of the increased work under the Technical Education Grant a Financial Secre-

tary was appointed, Miss R. Carr-Smith being elected. The following were also re-elected :—J. Simonds, Esq., Hon. Treasurer ; F. Cooksey, Esq., Hon. Librarian. The election of the Council followed, and those members willing to remain in office for 1894 were re-elected, with the addition of Mr. Councillor Parfitt, J.P., and two new District Secretaries—Mr. C. Chatterton for Faringdon, and Mr. W. Hommersham for Hungerford. Mr. W. Carter, Windsor, and Mr. F. Parfitt, Reading, were elected representatives at the meetings of the British Bee-keepers' Association in London.

Drafts of the annual report and balance-sheet having been distributed, the Chairman drew attention to some of the leading points, and in moving the adoption of the report, said that while there was much of a very satisfactory nature there was a serious drawback in the balance-sheet of the Technical Education account, the Association being saddled with a debt of £40, which, unless the County Council came to the rescue, must seriously hamper their work in the future.

It was proposed that : "The County Council be urged to accede to the application of this Association for a grant of £100 to carry out the Technical Education scheme on the same lines as last year, and to relieve the Berks B.K.A. of any financial difficulties." This proposal was carried unanimously, and the Hon. Secretary was instructed to forward the same to the Berks County Council.

Another feature in the annual report referred to is the honey scheme which was inaugurated some years back, and which has been so great a success—so much so that most county Bee-keepers' Associations are adopting it.

This concluded the general business, and the meeting afterwards closed with a vote of thanks to the Chairman for presiding.

COUNTY ASSOCIATIONS AND HONEY LABELS.

We are glad to note that the question of labelling members' honey for sale purposes is being taken up by several county associations, and in view of the approaching busy season it is advisable that active measures should be taken by all who regard the plan favourably without loss of time. It may be well, however, that such associations as have already resolved to adopt a county label should defer formulating their schemes until the subject has been discussed from the several standpoints of those who have given attention to the matter, in order to ensure the united action so desirable in the interest of all.

We therefore invite opinions for publication in our next issue.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of February, 1894, was £1,739.—*From a return furnished by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of Advertisements).*

⁂ *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1783.] The weather continues boisterous ; heavy storms of rain interspersed with periods of sunshine and rough winds seem the order of the day. Large numbers of bees are lost every day, many being swept from the alighting board to perish in sight of home with their loads of pollen and water. If we get a continuance of this kind of weather we shall hear of a great many instances of spring dwindling in stocks that are not very strong, and strong stocks cannot make good progress as with larger brood nests a larger quantity of pollen and water will be required, and this will necessitate a larger number of bees working to supply the wants, and of course a correspondingly larger death-rate. The best safeguard is a supply of water and pollen near the hives, and the hives in a sheltered position —unfortunately all bee-keepers are not able to obtain sheltered spots, but if I was looking out for a position for an apiary I should make a point of securing such a position.

Honey sales continue to engage the attention of the Bee-keepers' Associations, and the most reasonable device to ensure to the British public that they are using or consuming British honey is by using an Association label ; our Berkshire label is an effective one, distinct in design and of a good size for bottled honey, and the right size to affix to the top of a section of honey. They are numbered consecutively, and when sold to members entry is made of the numbers sold to each member, so that a reference is easily made as to who sold the honey when the label order book is consulted. At one end is a notice that honey crystallises in cold weather, and at the other that any complaint as to the quality should be made to the. hon sec. of the Berks Association.

In spacing frames, I notice Mr. Lamb mentions extra thick combs being produced by his method of inserting little blocks of wood between the ends of frames before the cells are sealed. May I ask if these very thick combs receive any great damage in the extractor, as

one would think that the half of the comb so heavy from the increased thickness would crush the other side very much in extracting, before the reversing of the comb in the extractor, and if such is the case the extra thick combs would require a lot of repair when returned to the bees for refilling, and thus militate against the utility of extra thick comb.

Mr. Lamb's contention that bees will winter as well on two crates of shallow frames as on one set of deep combs, have been, and is, verified in America every season, and those who have and do continue to use the Heddon hive (which is a shallow one) assert that they prefer the hive, and have no wish to return to the ordinary hive with deeper frames, in fact the users claim many advantages in the shallow hives.

This is the month for sowing seed for bee-flowers to increase the honey harvest later on.

Prospects are not very promising at present in this district. Many fields sown last dry summer with mixtures containing a proportion of white clover have failed, and are consequently ploughed up. This must curtail the honey-flow considerably. Vetches are better than they were last year at this time, but the quality of tare honey will not compare with white clover honey either in quantity or quality. The buds on the lime trees appear small this spring, probably owing to want of moisture when formed last autumn. Therefore, unless we get a growing spring we may have a limited quantity of stunted blossom later on.

The snowdrop and the crocus have bloomed too early to be of much help to the bees, and the palm also will soon be over. I have started to-day a supply of artificial pollen on shavings in some old skeps. I think it is some help to the bees if given moderately, but if given in large quantities I have noticed some colonies store more than they can use up, and the combs get somewhat clogged. I used to think it a great help, but since I have run an out-apiary, and find the out-apiary equal, and in some instances before, the home-apiary, I have modified my views on many points in bee-culture, and this is one of them.

Self-hivers have re-appeared in the pages of some of the American bee papers. Mr. Dibbern contributes an article on his style, which is an empty hive in front of the hive that is to swarm, and the bees can reach the brood nest, either through the swarm hive or by way of a wide passage under the swarm hive; of course, the outside entrance is covered with excluder zinc, so that after the colony has swarmed the queen coming to the zinc, and not able to pass, will go up through one of the wire-cloth cones and into the swarm-receiving hive, which is fitted with foundation ready to receive them, and by simply closing the bottom entrance all the incoming bees have to pass into the swarm hive. I should say the passage from the stock hive to the entrance is formed by a slatted honey board, *i.e.*, a board made of alternate strips of excluder zinc and slats of wood, so that until the old hive is removed quite away bees can still work into it at will, having to pass through the zinc in the honey board. What have our inventive geniuses planned for the coming (perhaps a very) swarming season?—W. Woodley, *Beedon, Newbury.*

PREVENTION OF SWARMING.

[1784.] If the following plan has never been tried, perhaps some of your readers would like to try it. It occurred to me that such must be effectual if the queen is of average size and the excluder zinc of the proper size:—When the stock hive is full of bees and becoming crowded—1. Fix a sheet of excluder zinc to the bottom of the second story box carefully and securely. This box must be capable of taking standard frames. 2. Move two frames of brood and the queen into this upper box, and fill up with frames of foundation. If the perforations in the zinc are the proper size, the queen is now a prisoner, but in no way prevented from increasing the strength of the stock. 3. Examine all the frames of brood carefully and destroy all queen cells; this operation must be repeated every three or four days until the brood is too old to produce queens. 4. Examine the upper story, too, to see that the queen is still there. If she has not found her way down to the stock by this time I think you may be certain she has tried and failed, and that the zinc is all right. 5. Fill up stock also with foundation. 6. If the frames of foundation are placed between the brood in the upper story, one by one, as drawn out, and filled with eggs, I think the increase won't be very rapid, and there is ample storage room in the stock as the brood hatches them.—A. G. Nicholson, *Hants, March* 8.

[Without going into the merits or demerits of the plan detailed above, we suggest that our correspondent himself makes a trial of it for a season, and favours us with results for publication.—Eds]

THE WEATHER AND THE BEES.

[1785.] In my opinion, this has been an ideal winter for bees—cold enough to prevent them from flying unduly, and yet with some fine days to give them an opportunity for a good cleansing flight. The mortality after that very sharp snap of frost in the early days of January did not appear to be large. More dead bees were brought out on Saturday, February 24, after being confined to their hives for a week by frost than on the previous occasion. I happened to be in the neighbourhood of a couple of bee-keepers owning about twenty-five hives, and it was a sight to a bee-keeper to see the bees so strong on the wing at this time of the year. The one owning fifteen of these hives is a skeppist of the old school, but has recently started two modern hives. He told me that he only had two swarms last year, and took no honey, but

his bees appear to be strong now, and as he is noted for April swarms, that is not to be wondered at.

The other is a young recruit started last year, who has got the bee-fever "hot." He devotes every spare minute to hive-making, intends to have fifty hives, and is making what I should call "Wells hives" upwards, or rather hives three storey high. I am afraid, however, it is a bad speculation, as he is in a neighbourhood in which foul-brood has decimated more than one bee-keeper, and yet the first-named skeppist has lived right through it all without taking any precaution to check it. He hives his swarms when they come, and puts them over the brimstone-tub in the autumn when he wants the honey. But I am getting rather wide of what I started to write. My bees commenced carrying pollen from the crocuses on the 4th of February, four days earlier than last year, which was a record-breaker with me, and to-day (February 27) I see the palm is out in full bloom, so that there will be something for them to work upon. As my hives are well-provisioned, I don't intend doing any early feeding this spring, but let them jog along at their own pace.—MAN OF KENT.

THE B.B.K.A. AND ITS AFFILIATED ASSOCIATIONS.

[1786.] To all well-wishers of the B.B.K.A. it is, to say the least, unpleasant information to read of the falling off in finances, as reported in B J. for March 1. This state of things naturally suggests a cause and a remedy, and, while not claiming to quite solve the first, I do venture to point out a defect and its remedy to my mind that exists in our county associations, which is curtailing the sphere of their usefulness both *pro* and *con*. As one of the best methods of strengthening the hands of the central or B.B.K.A., it appears to me of much importance that the county associations themselves, if they are to carry out the objects for which they exist, must be more effectually worked than they are at the present time, and must be more in sympathy and touch with the class supporting them before they can render more material aid to the parent society.

Take, for instance, the large county of Glamorgan, extending from east to west some eighty miles or so. Here is an association which, considered comparatively, is fairly prosperous, just paying its way. Most of its meetings are held at the east end of the county. But how many bee-keepers are practically interested in its working? What benefits in the way of bringing into prominence our products and assisting in their disposal does it confer? What opportunity for the exchange of individual ideas is afforded? Setting aside the visit of the expert (which is not always necessary), what general or social advantages does it offer to the middle-class or fairly well-to-do bee-keeper compared to what might be done? And this is mainly because of the narrowness and the very small local area influenced by its operations. Do you tell me intelligent bee-keepers are not sufficiently interested in the matter to place our Associations on a flourishing basis? If you do, I cannot accept it. Why—I ask in no cavilling spirit—should not the meetings be held in different towns alternately, or why should they be always held at one end of a county some sixty miles distant from the other end, or why should not there exist a branch or branches of county Associations? There are many other ways in which bee-men might be enlisted to help not only with local interests, but to swell the finances so much needed by the British Bee-keepers' Association. I refuse to think there is less money or interest in Beedom, even though admitted depression pervades commerce. The fact is, our Associations are too limited and inert to be practical and useful. They are not sufficiently democratic in their plans to advance with the times and make the most of the field before them. In times like the present not to be aggressive is to be retrogressive, and such seems to be the condition of some of the lugubrious bodies known as Bee Associations of to-day.—TOMTIT.

[We regret to hear of the shortcomings alleged against the Association referred to, and by way of an effort to remove or lessen them would suggest that our correspondent should attend the annual meeting (if not already held) and propose thereat such alterations as will secure the several advantages he desires. A few active local Hon. Secs. (himself for one, perhaps) would, no doubt, infuse the needed energy into the management. With regard to the general question, however, it must be obvious to all who read the reports appearing in our pages that many of our county associations are active and busy centres of bee-life and interest to their members. The real difficulty is to get a few of the "right men in the right place."—EDS.]

EARWIGS IN HIVES.

[1787.] In this morning's issue (page 86) it is stated that you do not know of any better way to get rid of earwigs than "brushing them from their nesting places into water and thus destroying them." May I mention my own experience? During last year, somewhere in your pages, it was mentioned that a piece of naphthaline crushed up and distributed over the quilts would prevent them making their appearance there. I tried it and have found it effectual in their case, and also in that of ants.—DELTA, *Gravesend, March* 1.

[We are glad to have our correspondent's testimony to the value of naphthaline as a preventive of earwigs about *quilts*, the use of which we have advised for keeping quilts clear of ants and earwigs; but the query on

p. 86 refers to keeping earwigs out of *hives*, and for this purpose we know of no remedy but brushing them off from their hiding-places into water, as stated in reply to 1774.—EDS.]

DO BEES HEAR?

(*Concluded from p.* 95.)

We all know that bees act at times just as if desiring to communicate certain things to us by sound. And that they modify the notes produced sufficiently to enable those familiar with them to know approximately what they wish to convey. We cannot, therefore, imagine how the bees could credit us with the possession of the sense of hearing unless themselves familiar with the use of it.

I attempted once to solve the matter by using the bees of a vagrant swarm I had hived on frames. I proceeded as follows :—Closing the hive after dark, I carried it to a corner of my apiary. Very early next morning, before any bees were on the wing, I went to the closed hive, and removed two frames with adhering bees, which I deftly slipped into a comb-box, closing both hive and box quickly, so as to prevent any of the bees knowing where they were. I then carried the comb-box to the opposite corner of the apiary, and, after dusting the bees on the two combs with flour, I threw them down on to the ground. I then stood in the centre of the apiary, so as to give the bees no clue as to the hive from which they had been removed. The first bees that took wing came and flew round about me for some time ; they endeavoured to obtain from me the situation of their hive, but I remained motionless, and they then tried the hives immediately in front of me with no better success, after which they enlarged the circle of their researches, and continued doing so, until at last I heard a piercing noise, emitted by one of the bees which had chanced to drop on the alighting board of the closed hive first referred to. From this moment the flying bees searching about for a home, as well as those arising from the ground whereon they had been tossed, all went straight for the hive from which the loud "call" was emitted, and helped to intensify it, although the hive containing the vagrant swarm was so turned that the bees on the wing could not see those on the alighting board until quite near them.

The natural inference, therefore, is that bees can hear, yet we cannot obtain quite satisfactory proof that such is the case, unless we entirely debar the bees from using the two other highly-developed faculties of scent and vision which we know they possess. When, however, we have found means of depriving the bees of the use of the senses of sight and smell, we know then that if they are still intelligently actuated by external causes greatly removed from them, it must be by the use of some other faculty they possess apart from those we have rendered useless.

I accidentally discovered a way to do this. One morning, while working among the bees, a large first swarm issued and settled on the lower part of the stem of a tree growing at the foot of a bank several feet below the surface of the apiary. When the swarm had settled quietly, I resolved not to hive it until later on in the day, but, fearing the bees might decamp, I removed its queen and placed her in a match-box in the tool-shed close by. I then took no more notice of the swarm until the bees had fully realised the loss of their queen, and were on the wing searching for her. At this point, when only a few bees of the cluster remained, it occurred to me that if bees really did hear, I could cause the swarm to settle again at their old spot without giving them their queen. Accordingly I applied a corner of the box containing the queen against the upper part of the stem of the tree on its shaded side, where no bees were flying, and about five yards above the remnant of the swarm. Immediately on my doing this, the few bees remaining on the spot where the queen had settled with the swarm began calling their fellows by the usual buzzing of their wings, and I kept the box in contact with the tree until most of the swarm on the wing had settled a second time. I repeated this experiment at intervals several times during the day, and always with the same result. The bees, after dispersing, would again cluster at their old spot when the box containing the queen was applied as before, notwithstanding that in each case it was applied at a distance of not less than 15 ft. from where the swarm clustered.

It seems evident that the bees were practically debarred from using their sense of sight in detecting the queen through her confinement inside the match-box, while their sense of smell was placed at a disadvantage, causing them to mistake the scent the queen had left behind for that of the queen itself. In this condition, by the use of what appeared to be a keen and highly-developed sense of hearing, they were enabled to recognise the movements of their queen from those of every other bee in the colony, and this notwithstanding the fact of her being fifteen feet away from them. This particular distance was only one of convenience, and the same experiment can be carried out at any greater distance by the use of a suitable sound-conductor and terminals. We may, therefore, reasonably infer that in the same way bees are able to recognise the members of their colony from stranger bees, just as we recognise certain members of our family by the sound of their footsteps. Also that bees are enabled to distinguish between the movements of a worker and those of a drone, or between those of a young or of an old bee, as well as the movements of the different varieties of brood in the cells. And that they are, by the same means, kept apprised of everything that is going on in the working of an active colony.

—PETER BOIS, *Jersey*.

Queries and Replies.

[968.] *Beginners and the "Wells" System.*—As a beginner with frame hives, I am very anxious for information on how to start the "Wells" system. 1. Would it be best to buy two stocks in standard frame hives just now, and transfer them into the "Wells," or wait for swarms which would probably not come off before the first week of June? 2. If I buy stocks, which kind of bee would be best, seeing that I have only the evenings to attend to them, and could never watch for swarms?—D. M. G., *Oban, N.B., March* 5.

Reply.—As "a beginner with frame-hives," and unable to attend to the bees during the day, or look out for swarms, you would stand a very small chance indeed of succeeding with hives managed on the "Wells" plan. Our advice is—gain more experience before courting failure by trial of a system which, of all others, demands not only attention at the proper time, but knowledge of what to do under conditions not within the ken of any but an experienced bee-keeper. We shall do all in our power to dissuade novices in bee-keeping from rashly venturing into the "Wells" system under such conditions as those in which our correspondent is placed.

[969.] *Mouldy Pollen in Store Combs.*—On looking over my stock of empty combs in the shallow extracting frames, to get them ready for the coming season, I have found that there is a considerable quantity of pollen in some of them, and some of the pollen has gone mouldy. I thought that it would save foundation if I were to remove the cells and pollen as completely as possible down to the foundation, and then let the bees repair these combs in the summer. I found, however, that it was impossible to remove *all* the pollen. Would you kindly advise me, therefore, in the Bee Journal whether a little pollen lying about would be removed by the bees, or would it be left, and so spoil the colour and flavour of honey stored in those combs? Had I better melt down those combs for wax, and give the bees fresh sheets of foundation? Thanking you in anticipation of a reply in an early issue of the Journal.—"Country Doctor," *Newark, March* 7.

Reply.—In dealing with such combs, other than by melting down, we have never had satisfactory results. Far better to have new combs built as proposed.

[970.] *Novices and Hive-making.*—I intend working a hive on the "Wells" system this year, and would be glad if you could give me a few hints on the manufacture of such a hive.

I am but a novice with respect to bar frames, having kept my bees for a number of years in skeps, and latterly in what you would term make-shift hives, and as I am a new subscriber to your paper, I have no back numbers to refer to. I intend to make the hive myself, and would be glad if you could give me the measurements of the hive proper, frames, shallow frames, crates, &c., and thickness of wood desirable to use in such a case.

I wish to have it made what is known as the "standard" size. What that size is I do not know, so that in order to make the thing a success, I should be enlightened as to the size to make the frames, &c. I wish to make the hive on the doubling system, to hold, say, two crates shallow frames, or three crates sections. A description of the system, and rough sketch of hive through the medium of your paper would be very acceptable.—Forster Lee.

Reply.—We advise our correspondent to obtain a copy of the "B.B.K. Guide-Book," price 1s. 8d., post free, wherein will be found details as to frames, hives, section-racks, &c., besides other information indispensable before a novice can understand the making and management of frame-hives on the modern system. It is like groping in the dark to work without the aid of a reliable guide-book, seeing how impossible it is for us to give all the necessary instructions in our "Query" column. By way of illustrating this latter fact, and without desiring to discourage queries on the part of beginners, we may say that the preparation of a full reply to the above queries would entail an expense equal to the amount of five or six years' subscription to the Journal. The standard frame is 14 in. by 8½ in., outside measure, and the shallow frame 14 in. by 5½ in., both having a top-bar 17 in. long and ⅞ in. thick. Frames accurately cut by machinery may, however, be bought so cheap as not to be worth making at home. For description of the "Wells" hive and system we must refer our correspondent to what has already appeared in past numbers of the B. J., which may be had post free for 1½d. each.

[971.] *Transferring combs infected with wax-moth.*—I have a skep which I believe is infested with the grubs of the wax-moth, and which I wish to transfer to a frame hive—how can I do so? My idea is to destroy the skep and combs, and make a swarm of the bees. When should I do this, if it is the best way to proceed?—Castel Cane, *East Dulwich, March* 7.

Reply.—If the skep is really infested with wax-moth it augurs badly for the stock being worth transferring at all, because only weak stocks allow the moth to gain any foothold in the combs. And weak stocks are not suitable for transferring. If, however, the bees are fairly strong at end of April, and weather is warm, they may be driven entirely from the skep, and such combs as contain brood be tied into the frames before introducing the bees.

[972.] *Hot-Beds near Hives.*—1. Will you kindly tell me if bees object to the smell of

manure? Our gardener has put up a hot-bed close to the bee-hives, and I wish to know if it should be taken down. 2. At the beginning of December I packed my hives for the winter with quilts, old papers, &c., and put cakes of candy under the quilts. Will it do harm by lifting the quilt to renew the supply? 3. At what date should I begin the work of "spring management?" I fancy that here in the Highlands it must be begun several weeks later than in England.—L. EVERARD JONES, *Fortwilliam, N.B.*

REPLY.—1. Without going so far as to say that positive mischief will occur from the proximity of the hot-bed to the hives, we should certainly have it moved, if convenient, for obvious reasons. 2. The candy cakes may be renewed when necessary, if care is taken to pack the quilts closely down on all sides when re-arranging coverings. 3. If food is plentiful in the hives, the best "spring management" in your Highland district will be to leave the bees undisturbed for some weeks to come. When they are seen busily gathering pollen, and are out working daily, some artificial help may be given, but too early stimulation is to be avoided.

[973.] *Scraping Top Bars of Frames.*—Will you give me a few hints as to scraping top bars of frames in the hive? 1. What do you find is practically the best instrument to use? 2. In future should I scrape them just after supers are removed?—T. B., *Upper Clapton.*

REPLY.—1. The ordinary spatula (2½ in. wide) used by painters when mixing paint. Any bee-appliance dealer will supply them for about 1s. 3d. Failing this, we have often used the back edge of an old carving knife. 2. The proper time to scrape top bars is when packing up the hive for winter.

Echoes from the Hives.

Honey-Cott, Weston, Leamington, March 10.—According to the season, the bees seem in good form, although as yet they have not been able to get much pollen in our neighbourhood. The watering-place is visited in great numbers, showing unmistakably that breeding is going on well at present. March has not come up to what it was last year. The plum-trees begin to look as though we might have some blossom out in a few days. I was very sorry to hear of the death of our dear old friend, Mr. C. N. Abbott, whom I have known for many years. In the last letter I had from him, in January, 1893, in the latter part of same he wrote:—"But, thank God, it is not so bad as it might have been—things never are, if rightly looked at, for there is a silver lining to every cloud, if we have hearts and eyes to look for it. Fancy! it is nearly twenty years since the BRITISH BEE JOURNAL first started, and during that time we have seen a good many ups and downs, not altogether in our own persons, but quite enough to make us grateful that we are not as many others are. Of course, I do not mean in the sense implied by the Pharisee of old, but because we are still alive and able to praise the Almighty, and say—'God be merciful to me a sinner.'—Yours as of old, C. N. ABBOTT." It may interest some readers if you can see your way to put this in the JOURNAL.—JOHN WALTON.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

THE Secretary of the British Bee-keepers' Association, J. Huckle, King's Langley, will be glad to hear of some one who will advise a poor widow residing at Claygate, near Esher, in the management of her bees.

APIS (Blackrock). *Dead sparrows and boiled chicken for bee-food.*—Such foods (?) as the above for bees, and the statement that they "thrive amazingly on them" may be set down as so many old women's tales, at which sensible bee-keepers only smile.

H. O. W. (Lee Ford). *Excluders for "Wells" hives.* — The excluder — covering twenty frames—should be in two parts, but when the single surplus-chamber is set on, in early work, a portion of it extends over both excluders, and the remaining part is quilted down until such time as the whole frame-surface of both compartments is used. Personally we set the excluder flat on frame tops.

WM. GEO. KIGHT. — We have written the dealer referred to on the subject of your complaint, it being altogether unusual to give advice on such matters in print.

L.B. *Mildewed Pollen in Combs.* — There is nothing more serious in comb than that the cells are nearly all full of mildewed pollen. The fact of one side of the "Wells" hive being deserted or beeless accounts for this condition. If the whole of the combs are in a similar state we should melt them down; but the bees may be left to remove the mouldy surface if there is not too much of it.

G. PICTON (Swansea). *How to Prepare Honey for Showing.*—There have been no special articles written on this subject, nor could we write anything half so useful as taking a few object-lessons by visiting a good show to see "how honey is prepared for showing."

F. SMITH (Nantwich). *Joining the B.B.K.A.*— The Secretary of the British Bee-keepers' Association, Mr. J. Huckle, King's Langley, Herts, will be happy to enrol you as a member of that body on receipt of subscription of 5*s.* upwards.

Articles are in type from Thos. K. Newbigging, Percy Leigh, G. Gordon Samson, "N. & N. E. R.," and G. J. Simpson, all of which will appear next week.

Editorial, Notices, &c.

USEFUL HINTS.

Weather.—We still miss even an approach to what may be called genuine winter weather, although seasonable March winds and heavy rains have been plentiful enough since our last "Hints" appeared. But these have now left us; the days are warm, the nights clear and cold with keen frost, consequently bees are not getting on so fast as last year at this season. April supers will, we opine, be missing in 1894 unless a very rapid change takes place. Consecutive night frosts, such as we are now experiencing—no matter how warm the sunny part of the day may be—greatly retard breeding, and almost entirely stop the secretion of nectar in the early flowers. Readers must, therefore, "bide a wee," and glance over what was said on p. 61 of our issue for February 15 before starting active operations.

Stimulating and Chilled Brood.—Early feeding in spring once begun should never be suspended until natural food can be had. It is this truism which makes us urge that merely *stimulative* feeding should never be started until bees are gathering natural pollen freely and flying daily. Nothing is more discouraging to the beginner—after working his bees up to rapid brood-rearing in March or early April—than to find whole combs of brood chilled and dead from the utter inability of the bees to cover all the brood in the hive owing to the considerable shrinkage the cluster undergoes through sudden and unlooked-for *night frosts*, with an outside temperature twenty or thirty degrees lower than that of the daytime. Left to themselves, this sort of mishap would rarely or never occur, but when roused to abnormal breeding by constant artificial feeding, the bees act more or less as if the season of natural honey gathering had arrived, with sometimes serious consequences to the inexperienced bee-keeper.

These remarks are made not with the view of discouraging what is known as modern methods of managing bees, but rather for the purpose of urging *beginners* to act with caution, and so save themselves the necessity for sending us samples of chilled brood in early spring with the query, "Is this foul brood?" If we are asked how best to safeguard novices against chilled brood, we reply—know enough of the consequences of injudicious carelessness to avoid risks, or else keep the bees confined to just so many combs as they cover until such time as the weather may be safely reckoned as free from night frosts.

Shallow-frame Brood-chambers.—Our correspondent, Mr. Lamb (1782, p. 97), expresses his intention of testing the "problem" whether bees will not "winter as well on two crates of shallow frames as on ten standard frames," and says if he finds it is so "the standard frame must go overboard." Our personal connection with what is called the shallow-frame for both brood and surplus chambers is well known to most old hands at bee-keeping, though, apparently, not to our correspondent. We therefore offer him the benefit of our experience for what it is worth. We formerly used two boxes (or crates) of shallow frames as a brood-chamber (see p. 44 of "The Guide Book," tenth edition, where our "Bebington Hive" is illustrated), and, after exhaustive trials extending over twelve or fifteen years, we gave up the idea, though it was our pet notion at the time. Now, instead of the standard frame *for brood-chambers* "going overboard" it has become a very firm fixture indeed in our apiary.

Disinfecting Hives.—The question of disinfecting hives is cropping up just now by reason of stocks being found either already defunct or affected with foul brood. A word of advice on disinfecting hives may therefore be useful at this season. First then, we recommend the total destruction by burning of all combs *and frames*. The hive and floor-board—after being well scraped and all *débris* got rid of—should then be scrubbed with very hot water, in which a large handful of common soda has been dissolved. This done, it is coated thoroughly, inside and out, with a solution of soluble phenyle in water (two teaspoonfuls to a quart of water). In mixing, the water must always be *poured on the phenyle*, and on shaking it forms an emulsion. As an alternative plan, the hive, after the first operation of scrubbing with hot water and soda, may receive two coats of good oil paint inside and out.

DEATH OF A SCOTCH VETERAN BEE-KEEPER.

Another devoted veteran of our craft has joined the great majority in the person of Mr. Wm. Sword, of Falkirk, who passed quietly away at his residence, on the 24th ult., in his 78th year.

Mr. Sword was well known and highly esteemed among his fellow-townsmen as a pioneer and active worker in every effort that had for its object the well-being of those by whom he was surrounded. After a long and successful business career, from which he was enabled to retire with a comfortable competency some fifteen years ago, he continued to take a lively interest in what might be termed his hobbies, chief among which may be named floriculture and bee-keeping.

So long ago as the first show at the Crystal Palace in 1874 Mr. Sword was a prominent bee-man, and formed one of the Scotch bee-keepers who travelled to that show, bringing with them their famous Stewarton supers of comb-honey which made such a stir among us bee-keepers at the time of their exhibition. As a personal reminiscence the writer well remembers taking a tracing of the glass-covered combs of one of these supers (possibly one staged by Mr. Sword himself) to show the beautiful regularity of the combs to his bee-friends on returning northward from the show. For many years afterwords Mr. Sword was a recognised authority in Scotland on bees and honey, and frequently acted as judge at the more important exhibitions, besides winning prizes himself at leading shows.

A man of sterling worth and integrity, he won the esteem of all honourable men with whom he came in contact, and his loss will be mourned by a large circle of friends. Colonel R. J. Bennett, who was hon. sec. of the Caledonian Apiarian Society—of which Mr. Sword was a member so long as it continued to exist—in a letter just to hand writes of him :—One of nature's gentlemen, he was ever the same, always willing to give advice, and sparing neither time nor money in assisting his brother bee-keepers. A hardy oak ; he has fallen at last in the full ripeness of his seventy-eight years. Peace to his ashes, and may his memory be ever green among us.

HEREFORDSHIRE BEE-KEEPERS' ASSOCIATION.

The annual general meeting was held at the Free Library, Hereford, February 27, 1894—Rev. F. S. Stooke Vaughan in the chair. The reports and balance-sheets were received and adopted. It was resolved to apply to the County Council for a grant of £85 for the purpose of the Bee-Van Tour ; to offer a bronze medal for competition at Flower Shows in accordance with a more definite scheme than in previous years, the wording of the class being defined ; to offer a champion silver medal at the Honey Fair, open only to the winners of the bronze medals at the local Flower Shows. The Officers were re-elected with some minor changes.

Among the items of general interest in the Hon. Secretary's annual report may be mentioned (1) Bee-Van Tour. This continues to be a very satisfactory branch of the Association's work, the cost being defrayed out of the grant of £85 made by the County Council for this special purpose. Thirty-seven working days were devoted to the Van, against twenty-eight last year. Decidedly more interest is shown in the lectures than in the past season, and the attendances have increased. The procedure has been the same which worked so well in the past year—viz., an afternoon demonstration in some bee-keeper's garden at 4, a talk from the Van at 7.30, and a short lecture at the Van, illustrated with the lime-light lantern at 9 o'clock. The lantern lecture invariably secured a good audience and close attention.

The Berkshire Bee-keepers' Association have followed the lead of Herefordshire in this matter, and have organised a similar tour in a van built at Hereford to the same pattern.

Members.—Thirty-eight new names have been added since printing the last list, and it is satisfactory to note a considerable reduction of the financial deficit with which the year commenced (chiefly due to the purchase of the bee van), and members' subscriptions have amounted to about £8 more than last year.

It is proposed to again apply to the County Council for a grant of £85 for the Bee-Van Tour.

A discussion took place on the desirability of providing a central depot for the sale of members' honey wholesale, in order to secure uniformity of package and grading, but no decision was arrived at.—ALFRED WATKINS, Hon. Sec.

SOUTH OF SCOTLAND BEE-KEEPERS' ASSOCIATION.

A BIG PRIZE LIST.

SIRS,—I have much pleasure in sending you herewith copy of prize schedule of our show to be held on August 10 and 11 next, at Dumfries, in connection with the South of Scotland Horticultural Society's Show. In it we offer five silver cups, twenty-four solid silver medals and over £14 in cash.

We have two classes open to the world, namely, for six 1-lb. bottles, prizes : first, silver cup and 40s. ; second, silver medal and 20s. ; third, silver medal ; and for six 1-lb. sections : first prize, silver cup and 20s. ; second, silver medal and 10s. ; third, silver medal. But any one may compete in all the classes by paying the membership subscription of 2s. 6d.

We have two novel classes, namely, 6 and 7, of which I would like your opinion and that

of your readers. No. 6 is for one super of honey to hold approximately 10 lb. This super is supplied by the Society, it will bear the stamp of the Association, and a number and can be shown only in name of party making entry. No. 7, twenty-one 1-lb. sections will be supplied by the Society, similarly stamped and numbered, and eighteen of these must be shown, all bearing same number. The entrance fees in both cases cover cost of super and sections; entries close May 31. Should we have a good season we hope to have a grand display of honey, and the attractions offered by the Flower Show Committee is sure to attract a full complement of visitors. I am sure you and all your readers will wish us all success in this our second venture.—THOS. K. NEWBIGGING, President, *Stewart Hall, Dumfries, March 5.*

DERBYSHIRE BEE-KEEPERS' ASSOCIATION.

LECTURE ON BEE-KEEPING.

In connection with the technical education scheme of the Derbyshire County Council, a capital lecture, arranged by the Derbyshire Bee-Keepers' Association, was given in the Abbey-street Higher Grade school on Saturday morning, the 10th inst., on "Bees and Bee-Keeping." The lecturer was Mr. T. W. Jones, of Etwall, first-class expert of the B. B. K. A. In the course of a clever discourse he dwelt at great length on the natural history of bees, besides giving a number of valuable hints on agriculture. The lecture was illustrated by lantern views, and proved of the most successful character.—*Communicated*

LECTURE ON BEE-KEEPING.

At the monthly meeting of the Society of Jersey Gardeners, held on the 8th inst. at the Beresford Café, Jersey, Mr. Peter Bois, the President, gave a very interesting lecture on bees and bee-keeping. The remarks of the lecturer were illustrated by about fifty lantern slides, some from Messrs. Newton & Co.'s list and others especially prepared for Mr. Bois's use, forming together a most perfect educational code of bee-keeping. Mr. Vardon operated at the lantern. The lecturer passed in review several very interesting points in the natural history, anatomy, and physiology of the honey-bee which are desirable to be known by those who interest themselves in, as well as by those who actually cultivate, that most fascinating, useful, and industrious insect. He went through the principal details of the intelligent management of the bee as practised by the most advanced bee-keepers of the present day. The lecturer was repeatedly applauded, and at the close he was accorded a hearty vote of thanks for his interesting and highly instructive paper. A vote of thanks was also given to Mr. A. Vardon for his services.—*Communicated.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of Advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

COUNTY ASSOCIATIONS AND HONEY LABELS.

[1788.] In reference to the correspondence which has now been going on advocating Association labels for different counties, I suppose it may be taken for granted that the principal reasons for advocating such are as follows :—

1. As a protective measure for British produce.
2. To facilitate the sale of members' honey.
3. And to educate the British public to ask for English honey instead of foreign.

The style of label as at present in use in the Berkshire district so far as I can judge from Mr. Wm. Woodley's letter on p. 105—which no doubt is working satisfactorily to that association—would in my opinion be disastrous to the interests of British bee-keepers if extended and allowed to become general all over these islands ; in fact, I go so far as to say it spells ruin as far as profitable bee-keeping is concerned. My reasons for saying this are briefly stated in the three heads, as follows :—

First, I have seen honey advertised in the B. J. in bulk at 3d. and also at 8d. per pound. Now, take for granted, or for the sake of argument, that both these samples were produced in the same county, the result would be that, if the public were educated to ask for Association-labelled honey, the price of the one would be raised, while the price of the better quality would be reduced ; and, to carry this to a logical conclusion, the bee-keeper has only to be sure that his honey is absolutely pure, and that it is gathered in the district of the Association label, to immediately have it labelled with the Association label, and it is transformed into the best quality of that county.

I notice that the Berks label has printed on it, "Any complaint as to the quality of the honey to be referred to the Secretary," or some such wording ; but we must recollect that people do not make complaints in this sense, but simply cease to buy the article

complained of. To this extent the measure, which is simply meant to be a protection, might easily in any county become a source of weakness instead of strength, thereby improving the sale of high-class foreign honeys, which are in some cases much superior to the inferior English product.

Secondly, whilst it would conduce to sell those members' honey who up till now have had a difficulty in disposing of their produce, it would be a most serious drawback to those bee-keepers who by patient grading and by allowing nothing to be sold but what was first class, have always been enabled to readily dispose of the whole of their harvest.

Thirdly, the British public will buy what suits them best, and is in their opinion worth the money asked; no other arguments are the slightest use. Patriotism is all very well upon a platform, but entirely melts away in every-day "shopping." One standard is calculated to lower the price of British honey, instead of raising it, and the Association label is in my opinion calculated to do this at a remarkably rapid rate.

Any of your readers who, whilst being bee-keepers, are largely engaged in commercial houses in any part of the country, will, I am sure, readily agree with the above remarks, and also as to the decidedly disastrous results which always follow any endeavour to reduce any article of consumption to a dead level of quality and price. Differences of quality and differences of price are the soul of profit, as far as bee-keepers or any other undertaking is concerned. Moreover, a bee-keeper who may be noted for excellence of honey may be almost coerced for the first season or two to adopt the Association label in his own interests, only to find that he can only get the same price for very choice goods, as another bee-keeper may be getting for an inferior article, notwithstanding that it may be "pure" and "English."

The other alternative as suggested in your issue of a fortnight ago, namely, of a guarantee label only, allowing everybody to use their own label, is of the two in my opinion the lesser evil, notwithstanding that although it might possibly serve the purpose, there is a serious risk that it will only produce a similar result.—R. W. NICKSON, *Frodsham, Cheshire.*

[1789.] Referring to the question of honey sales by the County Associations, I hoped the matter had been well thrashed out at the meeting of the B.B.K.A., fully reported in B.J. of October 26 and November 2 of last year, but judging from No. 1,780, p. 95, the Taunton District B.K.A. are starting *de novo* instead of taking advantage of the six years' experience of the Berks B.K.A. In the light of that experience, I see many difficulties ahead for them if they carry out the idea conveyed in his letter, and I do not envy the Hon. Secretary the job of filling in the number on each label—say 500 labels. I fancy he will soon tire of it, and give it up in disgust. With all respect, I say if Mr. Wolfe will follow out the directions given in my paper (see B. J., Oct. 26, 1893) he will save himself an immense amount of work and worry.

The leading feature of our scheme, and which experience has proved of the greatest value, is that our labels are numbered consecutively, and as the design is registered, they can only be obtained through the Association, and we supply them only to our members and agents. We usually purchase them in a set numbered from 1 to 20,000, packed in lots of 500, and it is the easiest matter for the Hon. Secretary on receipt of an order to take from the set in course of being sold, entering them in a register as follows:—

John Brown, Reading	100	1 to 100	1/3/94
W. Jones, Windsor ...	300	101 ,, 400	1/9/94

Thus we have with the least possible amount of work a complete reference, and in case of complaint we can at once trace the offender. The only references to labels so far received have been from inquirers as to where they can get more Berkshire honey, and our label is now so well known that many buyers will only purchase honey with it on.

Another important feature of our system is that it is automatic, but costless; in fact, it is a small source of revenue to the Association, the labels being sold at a small profit. This is a matter of importance to associations with rarely more than sufficient funds to pay their way.

Before closing I must say a word as to our difficulties; chiefly with members who have to be educated. First as to the best style of "putting up" honey. We have advanced a long way from the red pan for run honey and an earthenware dish for that in comb, and we hope soon to see the Berkshire honey successfully compete with the foreigner in this respect. We also impress upon members—as seen in printed form enclosed—to put labels upon none but the best samples. This is our method of solving the question of "foreign competition." One other difficulty to contend with is that members are sometimes a little impatient, and expect us to find a customer almost before the honey is removed from the hives, forgetting that many months must elapse before the season comes round again, and agents cannot be expected to hold a stock sufficient to last the year round. It is also very important that the supply should, if possible, meet the demand. We are, however, getting over this difficulty, and this year agents have been kept going up till now, A word of caution to associations who are about to take the matter up: don't enlarge your list of agents more than you feel you can keep supplied. It is better to "go slow" in this respect.

We claim for the Berks system :—1. It is simple ; 2. Practically automatic ; 3. Self-supporting ; 4. It opens a local trade among dealers who have been in the habit of dealing in foreign honey ; 5. It educates and promotes a taste for the native product produced at our own doors.

I have had communications from several county Hon. Secs. regarding the difficulty of obtaining a suitable label at a reasonable price, and in several cases the committee of the Berks Association have consented, under certain conditions, to allow our label to be localised and used by other counties. Our idea was that the British Bee-keepers' Association might have taken the matter up and produced a national label, which could have been localised by all or any of the counties. I ventured to hint as much at the annual meeting the other day, but it was not taken up very kindly. We shall be pleased to help any county association in this respect as far as we are able.—A. D. Woodley, Hon. Sec. Berks B.K.A., *Market-place, Reading.*

[1790.] Referring to your request on p. 105 of this week's Bee Journal, I send you copy of the Berks label which I hope you can reproduce in type, showing it full size, 5½ by 2 in.*

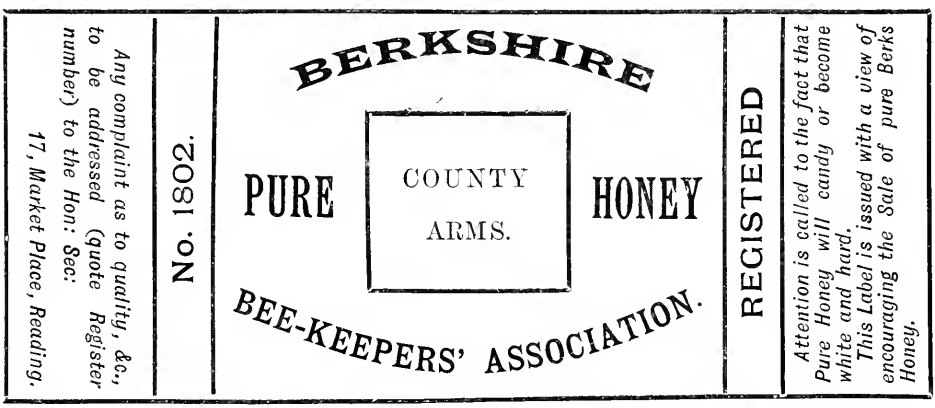
he should engage that the labels shall not be use on inferior or on foreign honey. The member or user should keep a register of sales and label numbers, for information in case of abuse of the system in third hands ; and the labels should be of a design that could not be easily (*i.e.*, cheaply) imitated.

I think the address of the hon. secretary should be omitted on label—addresses change. The label should not be altered when once adopted. I would also add the following information to the Berks matter :—

Comb honey should not be stored in cold or damp atmosphere, nor in contact with anything from which it is likely to acquire a flavour.

To liquefy candied honey place jar in warm water. Action of fire destroys flavour.

If five or six associations—say Kent, Essex, Notts, Derbyshire, Shropshire, and Lancashire and Cheshire—would join and buy 100,000 or 150,000 labels it would greatly lighten the burden for the individual association. The outlay would come back quickly with a profit, and each could get a supply of an ornamental label of expensive design for an outlay of about £5. As an experiment it would be unwise for one association to order 100,000, and they cannot be economically bought in less number, *i.e.*, not of really artistic design and colouring, which is desirable to prevent imitations.


BERKSHIRE
PURE
COUNTY
ARMS.
HONEY
BEE-KEEPERS' ASSOCIATION.
No. 1802.
REGISTERED
Any complaint as to quality, &c., to be addressed (quote Register number) to the Hon: Sec: 17, Market Place, Reading.
Attention is called to the fact that Pure Honey will candy or become white and hard. This Label is issued with a view of encouraging the Sale of pure Berks Honey.

The label is printed in colours—grey, vermilion, gold, and black.

The Kent B.K.A. design (not yet decided) is only 3¼ in. by 1¾ in., which is still too wide for the narrowest part of a "four-bee-way" section when cut away to 1½ in. The Kent size is a bit small for matter required on it, but is handier for small jars. Its colour is straw ground with blue and terra-cotta colouring, "Pure Honey" in prominent white letters.

The Berks Association charge 1s. per 100 for labels to their members. Each purchasing member should sign for his labels in order to trace the user or the apiary, and on the receipt

* Unfortunately our page is not elastic, consequently we cannot show the label full size as requested.—Eds.

The Kent B.K.A. would also like to issue window transparencies to agents (small enough to fit a cottage window-pane), ornamental and looking like a piece of stained glass, so as to be attractive too in the best shops (the best shopkeepers should always be selected where possible) ; but the expense stands in the way. One thousand is the smallest number to be bought advantageously. The agents would probably pay for the window-bill ; its cost would be not more than 3d. or 4d., and would last for years—*a constant advertisement in every town and village of the county bee-keepers' association.*

Now cannot some or all of the associations enumerated communicate with the hon. secretary of the Kent B.K.A., to get this business through quickly for the present season? The

labels sell at a good profit, so that all the money would come back as income—a good part in the present year. I should explain that this would mean the adoption of one form of label—the name of the association would be printed in at a separate process—it would necessitate the omission of the county arms, which is not important.

If the work is to begin this season not a moment should be lost. — T., *Eynsford, March* 16.

A VISIT TO AN IRISH APIARY.

A GOOD REPORT.

[1791.] I had a kind invitation from Canon Procter in September last to see his apiary at Tullamelan Rectory. September 9 was the day fixed on for the visit; the early morning of that day looked most unpropitious, and the rain came down in torrents when on the way to the nearest railway station, some seven miles distant; but bee people have some of the nature of the little bee who, when it has made up its mind to get to a place, it is a very serious obstacle indeed can prevent it, and 7 a.m. found me on rail, bound for Clonmel, fifty miles distant. This town—the town of the Vale of Honey (Clon—vale; mel—honey), is almost surrounded with hills, which, in passing, I could observe were brown with heather. The rectory is seven miles from Clonmel, and a drive on an outside Irish car, with a locally well-informed and chatty driver, along the banks of the river Suir, terminated in a warm and hospitable welcome from the Canon and his estimable lady, Mrs. Procter.

The Canon and I were soon out to the bees. On the way to the garden were to be seen bee shrubs of the berberis family. Our first move was to the garden-house; there was to be seen a pile of boxes, canvas underneath, filled with cork dust, ready to take the place of removed section crates; also a leather-covered book of Royalty, containing ages, &c., of all Queens. Our next move was to a corner of the garden from which the whole apiary could be seen at one time. A huge bunch of apples in the shape of a cluster of bees overhung the walk on the way up—the bees had evidently been there. It is probable it was from the view at this corner that Mr. C. N. Abbott, on a visit here about fifteen years ago, exclaimed, "An American apiary—a real American bee farm." I should call it a "Bee Garden," as the hives, about sixty in number, and painted a light colour, enliven the garden; and the apple-trees, with their rosy red fruit, set off the hives to perfection. There is no ground lost here; the hives are ranged along the walks, entrances for the most part inwards, and open from the walk behind, and the ground is tilled to the front of the hives. The garden and apiary help one another—they are "all one." The Canon had a surprise in store. He had placed Porter bee escapes under six crates on five hives the evening previous, and we proceeded to take off. Each rack held thirty-five sections, and in the whole 210 sections we found but four bees. The hive with two racks had previously given two similar racks or 140 sections altogether, and the harvest was not yet over. Some of his racks hold forty to forty-five sections each. He has a few only of twenty-four to twenty-eight. No 21 section racks. Several of the hives had glass both sides and back, with thick hinged shutters to close in. The bees seemed doing very well in them. One hive had three stocks, entrances, ends and front.

The hives were all Langstroth make, with frames 16 in. by 10 in.; a hive of Mr. Langstroth's first pattern was still in use slightly altered for modern requirements. What struck me as peculiar about these hives was their size, solidity (inch timber being worked in everywhere possible), and fine finish. A call now to further put to a test the worthy Canon's and his lady's hospitality and a subsequent visit to the workshop, where were to be seen a hive in construction, the splendid inch planks used, a circular saw, and tools in abundance, brought to its close a visit very enjoyable, and which left much food for thought. I append an account of returns of his apiary in the Canon's own words, from a letter I had from him on the 15th of this month. He states:—"My unvarying success through all seasons for the past fifteen years is remarkable; as I have neither fed, nor stimulated, nor re-queened, nor done anything to promote greater activity among my bees, so I disclaim all credit for my success, except that of providing room and material to work upon. 1892 was generally a bad season, yet my take of finished sections amounted to 1,792, and from unfinished 3½ cwt. of extracted. Notwithstanding the great interruption of work by swarming, no less than forty out of fifty-five that had made advance with section work having swarmed again and again; but the late harvest made up lost way. Again, 1893 was a very broken season, so much so that when you visited me I told you I did not expect to exceed 1,400 finished sections; yet, although the weather continued much of the same character, I obtained over 1,800 finished and 5½ cwt. of extracted; all of the latter, and 1,728 of the former, I sold to one firm in London at, I may say, a high price, and with high praise as to the quality of both, so I have reason to be satisfied with my results." This is not bad for an octogenarian (considerably over a ton of honey last season from fifty working hives), and for one who has often no time to attend to his bees when they require it. They swarmed six times last year, five of which swarms he lost, having been obliged to be from home on more important duties than bee-keeping. I have noticed that this apiary has yearly, for these last seven years, turned out very nearly a ton of honey, and can come

to no conclusion but that the Langstroth frame has a great deal to say to such high "results." The Canon writes in reply to a query of mine: "With regard to the Langstroth frame, it certainly gives greater scope to the working powers of our stocks which would be cramped in small standard frames, especially if used in my locality." The firm to whom the Canon sold this year, and to whom he refers above, wrote "they hoped he might be long spared to send them many consignments of his beautiful honey, with which wish, coupled with, and to show them how to produce it, no doubt all bee-keepers and readers of the JOURNAL will heartily join.—W. B., *Patrickswell, Co. Limerick.*

TRANSFERRING BEES IN THE WEST INDIES.

[1792.] I send herewith samples of foundation I imported from an English dealer as "best brood." To my mind it is dirty, and of very unequal thickness. The paper between the sheets was old newspaper. I purposely refrain from mentioning the dealer's name as I have no wish to quarrel with him, and only invoke your opinion because I am a new hand at bee-keeping, and my remonstrances may need backing up with authority.

I bought some bees in hives which, from their shape, rendered it very difficult to drive the bees as directed in "Cowan's Guide-book," so I determined to proceed somewhat on the lines recommended by Root, in his "A B C of Bee-culture." I accordingly, with the aid of a smoker, cut the combs out of one hive, shaking and brushing the bees off on to a sheet in front of a moveable frame-hive, and, lastly, pouring the bulk of the bees which remained in the old hive on the sheet. I found the queen and assisted her to the entrance of the new hive, and soon after had the gratification of seeing every bee safely housed. I waited a few days, then cut away the tapes used in transferring some of the brood combs, and closed up the division-boards to the requirements of the hive, and up to the present time the bees are doing nicely, drawing out foundation, and otherwise working well. The transferring was done in January. Feeling that my experiment was a success, I was emboldened to repeat it on the five remaining hives I had to transfer. The first was done without a hitch, and the bees have taken to the hive and are working well up to the present time. I immediately began operations on another, and thought I had succeeded admirably, but next day when I went to examine and contract the brood nest I found that only about half a pint of bees remained in it with the queen, clustered on a frame of brood I had transferred. The third hive I transferred as soon as I had finished with the second. It was rather a weak stock, and I failed, after a most careful search, to find a queen, but the bees entered the new hive rather more eagerly than those in the two first hives had done. I hoped the queen was among them, although I had not seen her. Next day on examination I only found five or six bees in the new hive, and no queen. On the day I transferred the three stocks last mentioned I thought the bees seemed to be rather excited, and I determined to cease operations until they became quiet. I transferred at a distance of 20 yards or so from the apiary, and was most careful not to set the honey running, and when I found any was spilled I immediately had it wiped up and the place washed with water. Towards afternoon everything seemed quieter, and I resumed operations with the two remaining stocks. After I had got them into their new houses and seen the queen safe with them, I went into my house to transfer any combs of brood that were worth the trouble, and left a friend to observe the bees in my absence. In a short time my friend sent to call me, saying the bees seemed to be leaving one of the hives and clustering on a tree near by. I returned, found it was so, and shook the bees into a metal pail and returned them to the hive. My friend thought they had left. Next morning I examined and found I had given the bees from the tree to the wrong hive, as one was simply crammed with bees, and the other had only the queen and half a dozen bees. As they appeared to have united peacefully, I did not regret it, and secured the deserted queen with the intention of giving her to the hive that appeared to want a queen on the previous day, but, as I have already related, I found that hive deserted. Was it not strange that these bees which clustered on the tree should have deserted their queen, who, as I have said, remained in the empty hive until next morning? Did I do wrong to transfer so many hives in one day? I knew my method was not orthodox, but as it had succeeded so well with the first hive, I really hoped I should have done equally well with the others.

I have written you a terribly long epistle, and am giving you lots of bother, but I trust you will help me with your advice, as there is no one here who can advise me. I am making a sincere effort to introduce scientific bee-keeping into this island. I am a subscriber to your journal, and have studied all the bee literature I can put my hands on. I have a Cowan's "Guide," Root's "A, B, C," and am expecting a Dadant's "Langstroth" by next American steamer. I hope you won't throw cold water on my efforts—everything here is so different from what it is on your side of the water.

With many apologies, J. G. SIMPSON, *Bridgetown, Barbadoes, February* 10, 1894.

[For a first attempt it cannot be said that your "transferring" ended badly, after all, seeing that three established stocks remain—one containing a double lot of bees—from the five hives with queens operated on. It is difficult for us to account for the partial

failure] of the later attempts; perhaps the excitement of continuing caused you to be less careful as the work went on. Anyway, beyond this, there is no reason why the same result should not have happened in each case, other conditions being alike.

Referring to the sample of comb-foundation, it has all the appearance of old stock, being, as stated, "dirty" in condition, and, if sent out so, is not very creditable to the dealer who supplied it.

We shall be pleased to have further reports of your bee-experience in the West Indies.—EDS.]

THE GLAMORGANSHIRE B.K.A. AND ITS CRITICS.

[1793.] Your correspondent "Tomtit" (1786, p. 107), who, as I think, tries to stab in the dark the Glamorganshire Bee-keepers' Association, makes most unjust charges against our Society. He asks with indignation, "What benefits we offer in the way of bringing honey into prominence and assisting in its sale," and says, "What opportunity for the exchange of individual ideas does it confer?" To this there is a full and complete answer:—Every year we combine with the Glamorganshire Agricultural Society in their annual show. This show is held each year in different parts of the county, and is attended by thousands of visitors. Around the bee-tent there is always a throng of ardent bee-keepers exchanging views, and in the honey-tent a large sale is constantly going on. I sold in this show at Bridgend last year about £10 worth of honey, and "Tomtit" could have done the same if his honey is good.

Instead of trying to run down the G.B.K.A., let "Tomtit" come boldly forward and throw his energies into the work. Some years ago another anonymous writer tried to find fault, but happily he became converted, and has since helped us materially.—E. J. GIBBINS, *Neath, March* 15, 1894.

PREVENTION OF SWARMING.

[1794.] Judging by the results, my writing must have been difficult to read, for in my letter (1784, p. 106) there are two errors which render it rather unintelligible, viz.:—In second line from end "won't be very rapid" should read "*would* be very rapid," and the last word should be "*there*" and not "them." I also see that paragraph 3 would be clearer if the words "in the stock" were inserted after "frames of brood."

I am sorry that I shall not be able to try the experiment myself, as I return to India on April 6, by the P. & O. *Himalaya*, and though I am taking out four hives I have found great difficulty in getting them to swarm at all there, and so, perhaps, some of your other readers will try it and let us know the results.—A. G. NICHOLSON, *March* 16.

FERTILISATION OF FLOWERS BY BEES.

[1795.] I should much like to call the attention of your readers to an article in the March number of *Harper's Monthly*, entitled "The Welcomes of the Flowers," by Mr. Hamilton Gibson. It deals chiefly with the cross-fertilisation of flowers by bees, tracing the discovery of this important function of the bee, and illustrating the methods adopted by it to secure this effect, in a manner which I am sure will interest and instruct all bee-keepers and lend an added zest to every country walk.—F. J. CRIBB, *Morton, Gainsboro', March* 17.

WEATHER REPORT FOR FEBRUARY.

COUNTY ASSOCIATIONS AND B.B.K.A. MEDALS.

[1796.] When reading report of the annual meeting of the B.B.K.A., I was more than glad to see that affiliated associations will still be able to procure medals from the parent association. I feel sure that many bee-keepers would be very disappointed if they no longer had a chance of winning the much-coveted B.B.K.A. medal. I should be for one.

Referring to weather for February:—1·75 in. of rain fell here during last month. The greatest rainfall for twenty-four hours was on the 17th ult., when 0·7 in. were registered. Rain fell on thirteen days. I find the February of this year was the wettest one since 1885, for then 2·71 in. fell. The February of 1881, when 3·1 in. were noted, was the wettest for the last seventeen years. The maximum shade temp. was 54 degs. on the 26th, and the minimum 21 degs. on the 19th. The mercury in barometer stood at 30—the maximum—on the 19th and 20th, but fell to 29·05 on the 12th.—PERCY LEIGH, *Bee Mount, Stoke Prior, March* 17.

Queries and Replies.

[974.] *Transferring Bees, Wax-moth in Quilts, &c.*—1. I have three strong stocks of bees in skeps, which I wish to transfer to frame hives. Would it be judicious to drive them the first warm day or wait until later in the season? 2. On examining many of my quilts I find a large number of white grubs or maggots in them. Are these larvæ of the wax moth or common cloth moth? Surely it would be the wrong time of the year for them to be in larva form? 3. What preparation could I use to prevent their appearance in future? 4. I have just moved a stock of bees a distance of two miles and painted the hive, and I now notice the bees are suffering from dysentery. Is this caused by the excitement in moving, or by the paint. Will the dysentery disappear now that the bees are quiet and

settled down, or should I further disturb them by giving them a clean hive? 5. Among six hives I have only one which I believe contains any drone comb. Is there any necessity to supply any of the hives with drone foundation? —HAROLD M. BRYANS, *Malpas, Cheshire, March* 13.

REPLY.—1. We should not transfer till the first or second week in May in your district; but before transferring at all kindly read our reply to 955 on p. 77 of B.J. for February 22. 2. The larvæ will no doubt be that of the wax moth. The warmth of quilts causes their early development. 3. A few pieces of naphthaline between the quilts will keep the moths away. 4. It is probably only a false alarm, the specking noticed being simply the result of disturbance. 5. If the combs are really free from drone-cells (which we doubt) cutting out a piece at the bottom edge will soon cause drone-cells to be built in the space formed.

[975.] *Distance below Frames. — Sliding Floor-Boards.*—I am about to make a bee-hive to take "Lee's patent frames," and should feel very much obliged if you would kindly say:—1. At what distance from the floor-board in the hive should the bottoms of the frames be, so as to allow the bees to reach the frames after entering? 2. Would it be better to have a false floor-board inside the hive, so as to pull out from the front or back of the hive, to facilitate cleaning when necessary?—H. S. L., *Ilford, Sussex.*

REPLY.—1. Half an inch. 2. It is quite common to have hives with fixed legs, in which the floor-board is made to slide on runners slanting upward to the back of the hive. The floor-board, after being pushed home, is wedged up in front by a slip of wood provided for the purpose.

[976.] *Mildewed Combs.—Wax Extracting.* —1. I notice my shallow extracting frames are getting slightly mildewed. They have been in an open rack in the attic, but to-day I have put them in a ventilated cupboard. What is best to do previous to using them this summer? 2. In melting up old combs, how much oil of vitriol (sulphuric acid) is required to keep wax a good colour? Is it put with melting combs or into pan catching clean melted wax?—EAST SUSSEX.

REPLY.—1. If combs are only "slightly mildewed" the bees themselves will readily clean them before storing honey in the cells. Where there is more than slight mouldiness they may be syringed with salicylic acid solution and put through the extractor to dry them; but very mouldy combs should be melted down. 2. Sulphuric acid is of course only used when combs are melted in the water, not by the steaming process. A teaspoonful of acid is sufficient for a half-gallon of water.

[977.] *Moving Bees.*—I am about to purchase some stocks of bees now located some 30 miles off. Would it be best to move them by rail or road? If by road, would a light wagon be a suitable conveyance? and would the present time be too cold? 2. In the event of my moving some hives to a new place only half-a-mile from where they now stand, would the bees be likely to return to their old home? —ANXIOUS, *Tunbridge Wells, March* 14.

REPLY.—1. If railway station is at all convenient to beginning and end of the journey, the rail would be far the best mode of conveyance. Otherwise a light vehicle on springs should be used. Choose a cold day, and the sooner the bees are moved the better. 2. Not if moved at once, before the season's work is properly started.

[978.] *Mildewed Pollen in Combs.*—1. Will you please tell me what is the cure for the mildew on the pollen in the combs? Will the bees carry it away or should I do anything? 2. Will it be safe to give a swarm, when it comes off, to my neighbour in the next garden, or is it too near?—CUTHBERT BEDE, *Durham.*

REPLY.—1. If the pollen is soft and fit for the bees' use the mildew could be got rid of by applying salicylic acid solution; but as we fear it has become hard, and consequently useless, it would be false economy to give it to them to clear out at an enormous expenditure of labour. 2. Quite safe.

[979.] *Renewing Combs in Hives.*—I have been told that when combs get to be two or three years old they turn a blackish colour, and consequently are not so good for the bees. As my stock is now two years old, would it be to my advantage to drive the bees into a new hive after they have swarmed this season? They are now in an ordinary box, so I have no means of ascertaining the state of the combs, &c. If it would be advantageous to drive them, how soon after they have swarmed should I do so? and what time of the day to operate?—D. W. LEWIS, *Fishguard, Pem., March* 17.

REPLY.—It will certainly be advantageous to do away with the "box" in which the combs cannot be examined; otherwise there is no need for renewing them because they are two years old. Combs are often kept five or six years with no appreciable disadvantage. The proper time for "driving" is twenty-one days after the bees have swarmed. Any time in the day will do.

[980.] *Clipping Queen-Bees' Wings.*—I have made up my mind to try the plan of clipping the queen-bees' wings this year, as advocated by Mr. Boomhower in BRITISH BEE JOURNAL some time ago. To-day I clipped three of my queens, but it just struck me whether I was doing right, and, before doing the others, I thought it best to write and ask whether it was too early to do it. I am under the impression that it might be done at any

season of the year, providing that the queens are fertile and laying. Please say if my assumption is correct.—DORSET.

REPLY.—Yes.

Echoes from the Hives.

Beemount, Stoke Prior, Worcestershire, March 9.—When walking through my garden last night about 9.30, my ears were assailed by a sound which proved to be a genuine "Echo from the Hive." It came from one of the stocks I commenced feeding last Saturday, and reminded one of the humming heard at the close of a sultry June day. This stock has been taking down about a quarter of a pint of syrup daily, since last Saturday. I, yesterday, weighed a stock I have in a skep, and found it lighter than was safe, so gave it a pint of syrup over the hole in crown, and intend replenishing the supply every fourth day while needed. I greatly approve of having hive roofs fitted with ventilators of perforated zinc, front and back. This allows a good current of air to circulate in the space above the quilts, and tends to keep the wrappings dry. My hives, so fitted, are much drier than the others. Weather this month, so far, has been fairly mild, but wet.—PERCY LEIGH.

Hurstmonceux, March 19.—My bees, so far, have passed through the winter very well, and as far as outside appearance they seem very strong; they are very busy at the crocuses and willows, now in full bloom, pollen being carried in very plentifully. I have made no inside examination yet, only giving soft candy over the feed-hole in quilts. I want to examine one hive soon, for drones have been flying from it for two or three days. Last year I had drones flying on March 5, but the hive never did anything all the summer, and I had to unite two lots to them to carry them through the winter, and they appear to be all right at present. I have now only five hives, as I had no swarm last season, and I lost one stock through the wasps after a very fierce battle. My best hive last season gave me eighty-two sections and 10 lb. extracted honey, and, after losing one hive altogether, and another giving no returns, I made a clear profit of £8. 5s. 4d. from four hives. I started the spring of 1893 with six stocks, and I hope that the season of 1894 will prove as profitable for myself and my fellow bee-keepers.—S. NEWNHAM.

School House, Combe, Woodstock, March 18.—I this day received a live drone from a neighbour, who has upwards of twenty stocks in frame hives. Is it not remarkable for a drone to make its appearance so early in the season? I should very much like to have your opinion of the early appearance. I am told that hundreds of worker-bees are flying from the same hive, which faces due north. My own apiary contains ten stocks in frame hives, and I never recollect seeing such large quantities of bees flying so early in the season n There are several woods close to my apiary. I went this morning to gather a few sprigs of palm, and the palms were completely covered with bees, my little son remarking that "I ought to fetch a hive, as he was sure there was a swarm." I hear very little complaining about the wintering of bees, and should the weather continue fine no doubt there will be a greater number of swarms than last year. During last winter, when lecturing on bee-keeping under the auspices of the Oxfordshire County Council, I was often asked why there were such few swarms last summer.—THOS. HUGHES.

Morton, Gainsborough, March 17.—Bees had a splendid fly here to-day—best this year. All my five new queens raised last autumn are on business bent, if I may judge by the pollen going in.—F. J. CRIBB.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

*** *Errata.*—An obvious error occurred in the middle of first col. on p. 103 last week. In our obituary notice of the late Mr. Abbott, when referring to the date of his vacating the editorship of this journal—the year should have been 1882, not "1892," as printed.

C. E. APPLEBY (Leeds). *Supering "Well's" hives.*—Mr. Wells gives surplus-room in the ordinary way, excepting that the single super first given extends over both compartments of the hive. See reply to H. O. W., on p. 110, last week.

W. W. DAVIES (East Dulwich).—We cannot trace foul brood in comb sent, and without further details can offer no reliable opinion as to the cause of the brood failing to hatch out. Have you been over medicating the hive?

PERCY LEIGH. *Sugar for bee-food.*—No. 1 is an unrefined sugar, and as such (whether cane or not) is unsuitable for bee-food. No. 2 will answer well if pure cane, but we should require the grocer's guarantee before using it.

FREDK. S. FLETCHER (Ottershaw).—We think you are in error in supposing the Surrey Association to be in the condition stated; but in any case a post-card to the secretary of the B.B.K.A. (Mr. J. Huckle, King's Langley) would obtain for you some information as to the Bath and W.E. Agricultural Show at Guilford.

Editorial, Notices, &c.

COUNTY ASSOCIATION AND HONEY LABELS.

The manner in which the invitation offered in our issue of the 15th inst. (p. 105) has been responded to cannot be regarded as other than highly satisfactory. It is, of course, impossible to print in one week more than a selection from the many letters referring to this particular subject owing to the limited space at our disposal; but the communications on p. 113 and two following pages sufficiently embrace the several aspects of the case to make them fairly representative, seeing that each writer approaches the subject from a different standpoint, and that between them the whole ground is moderately-well covered.

Mr. Nickson, in his excellent letter (1,788, p. 113), takes a view of the question which we should be sorry to see ignored by those interested, because, whatever may be resolved upon in the endeavour to foster the sale of British honey, the purely business, or "shopping," aspect of the question must be kept steadily in view as being one of the important factors in the case. It is not what we bee-keepers desire that honey consumers *should* do under certain circumstances, but what business experience has proved that they very probably *will* do, which must guide our action in this matter, and we entirely agree with our correspondent in believing that any attempt to reduce prices to a "dead level" regardless of quality would have a disastrous effect on those it is intended to benefit. But it is an error to suppose that such intention exists. In none of the schemes so far formulated is anything of the kind attempted; on the contrary, buyers and sellers are left to fix prices between themselves, entirely regardless of the County Association or its label. We have not even heard of any suggestion as to "fixed" prices, and it is quite certain that producers will sell and dealers will buy according to quality, while prices are bound to be regulated by the inexorable law of demand and supply. It is always well to "get at" the practical side of questions of this kind, and in this connection we can assure our correspondent, and those who think with him, that wholesale honey buyers soon acquire the knack of knowing the quality of honey usually gathered in the district from which the producer hails, consequently, the name of the latter becomes a sort of "brand" as to quality—good or bad, as the case may be. Moreover, it would be absurd to suppose that the mere affixing of a County label would cover faults as to quality, or do anything beyond guaranteeing its being County honey, which, as is well known, varies considerably in quality within a radius of ten or twenty miles. This variation is neither overlooked nor unprovided for. As the Hon. Sec. of the Berks Association observes, on p. 114, "We impress on members to put labels on none but the best samples," and his subsequent statement as to the favour with which the Berks label is regarded by honey consumers makes it apparent that the admonition has had the desired effect.

Our personal knowledge of the locality from which Mr. Nickson dates his letter quite accounts, to our mind, for the disfavour with which he regards the equalisation of prices for honey. Time was when our own bees gathered Cheshire honey in no small quantity, and of such quality that we had no difficulty in disposing of all our surplus at 1s. 4d. to 1s. 6d. per 1 lb. jar. But those days have gone by—"big prices" along with them—and we are faced to-day with altogether different conditions. Moreover, improved methods have so added to the quantity of honey per hive now obtainable that if former prices ruled, along with the brisk demand of our early experiences, honey-production would be so profitable an industry that it would be swamped by the recruits joining our ranks.

To return to the question as it presents itself under the vastly different conditions of to-day, it cannot be denied that something is needed in the two-fold direction of developing a taste for honey as an article of food, and the formulating of a practical scheme for aiding those who, while able to fulfil the first requirement of successful bee-keeping, to wit, the harvesting of honey in good quantity, find it difficult to sell their produce.

Bee associations would fail in one of the main objects for which they exist if they ignored this question, and the desire of those who are moving in the matter is to confer an addition to the

"advantages of membership" by removing the difficulty referred to. And we see no reason why it should be done at the expense of others who, fortunately for themselves, are free from the trouble complained of.

It would seem as if the "awful examples" of cheap honey culled from our advertisement pages would always crop up in such discussions as we are now engaged in; that "Extracted Honey 3d. per lb." being, no doubt, a sore point with bee-keepers located in a district where honey usually sells at not less than a shilling. But in the advertisement referred to the honey is neither quoted as "British" nor *good*; let us, therefore, charitably assume that it is "Foreign" and *bad*, in order to save the seller's credit, and if our assumption be correct the price asked will doubtless represent its full value.

As already said, we were fortunate last week in being able to present the case of honey labelling from the several aspects in which it is regarded by bee-keepers, who each view the matter in a different light, and our Cheshire correspondent's letter has only been selected for special reference because of its tone and general bearing tending against the County Association point of view, which has many advocates among BEE JOURNAL readers. There is, however, no reason why all sides should not be heard, and our own earnest hope is that selfish or narrow-minded views may have little weight in considering what will tend to the greatest good of the greatest number.

ULSTER BEE-KEEPERS' ASSOCIATION.

The tenth annual general meeting of this association was held at 41, Waring-street, Belfast, Mr. E. Smith presiding. The report of the committee for 1893 showed a fairly prosperous year as regards the association, but only an average one from the bee-keeper's point of view; for, while want of sun spoiled the seasons of 1890-91-92, the excessive supply of it in 1893 proved almost as bad, the nectar of the flowers being very scarce through the drought. The depot for the sale of honey continues to thrive under the care of Messrs. A. Dickson & Sons, supplies being well maintained by the members, and the demand fairly good. The office-bearers and committee were unanimously re-elected, Mr. S. Cunningham being induced to again accept the hon. treasurership, and Mr. A. W. Child, 3, Albert-square, the hon. secretaryship.

A CURE FOR THE SWARMING FEVER.

In my last article I related some experiments made with the self-hiver as preventing swarming. The result was that the swarming fever would persist as long as there was a queen or a queen-cell, or even unsealed larvæ or eggs in the hive, but after the colony had been hopelessly queenless a few days, all thoughts of swarming were given up, and the colony would go to work again regularly, even if left queenless.

This was new to me, and entirely unexpected. I knew that many of our leading bee-keepers remove their queens during the swarming season, but I thought it was simply to prevent the issue of a swarm, or, in other words, a preventive against actual swarming, instead of a cure against the swarming fever.

The next step was to find out among our bee-papers what had been already done in that line. Messrs. Doolittle's, Miller's, and Manum's experiments are not very definite. They have very frequently removed the queens in order to save the honey that the rearing of "useless consumers" would have employed, and comparing the queenless colony to one working under normal conditions, found the queenless colony rather at a disadvantage. Frequently they cage the queens in the hives instead of removing them entirely. They seldom left the colonies hopelessly queenless, often giving them brood from other colonies, if necessary, rather than having them without unsealed brood, and thus missed the most important point in overcoming the swarming fever, that is, to have the colonies hopelessly queenless for a few days.

I will now quote from Messrs. Elwood & Atkin:—

"Caging the queens does not cure the swarming fever. Taking them out does." (P. H. Elwood, in *Gleanings* for April, 1890, page 255.)

"He who allows his bees to increase by natural swarming at their own good (?) pleasure, may be called a bee-keeper; but it is only he who has learned to control increase that has earned the title of bee-master. When running bees for extracted honey, it is comparatively easy to control swarming; for by giving a large amount of room for both brood and honey, and extracting the old honey, and afterward the new just before the main flow commences, there will be, usually, no attempt to swarm; with reasonable attention to extracting afterward. When comb honey is produced, it is much more difficult to control increase. The well-filled brood-nest, so necessary to the successful production of comb honey, is also very favourable to the forcing out of swarms. Cutting out queen-cells, the withdrawal of brood, only delay, but do not prevent swarming, while there is danger of throwing the colony in the state known as 'swarming fever.' In this state work, to a

large degree, will be suspended, and the bees show by unmistakable signs, that they are dissatisfied. The bee-keeper will be similarly affected when in the midst of a honey-flow he comes to look into the surplus receptacles.

"In every apiary there are some colonies that will work right along without any attempt to swarm. When no increase is desired, there is no need of molesting them, as they usually produce their full share of comb honey. All other colonies, as they complete their preparations for swarming, should have their queens removed with one or more combs of brood, and enough workers to protect it, and be placed in another hive or small receptacle provided for her. All queen-cells old enough to hatch within nine days ought to be removed. On the eighth or ninth day after, all cells should be broken, leaving the colony hopelessly queenless. In a week or ten days longer, the old queen may be smoked back into the hive." (P. H. Elwood, in the *Apiculturist* for June, 1888, and *Review* for June, 1888.)

"Mr. Cushman asks if the great stimulus or increased working energy of the natural swarm is not lost by this method. In a contest with our queenless colony a natural swarm falls behind from lack of numbers before the expiration of three weeks. The natural swarm for the modern small hive, usually none too strong at the start, is rapidly losing, while the queenless colony is rapidly increasing in strength from hatching brood. In the experiences of Capt. Hetherington and myself it has been noticed that the first eight days' work of the queenless colony, while rearing queen-cells, is the poorest. The second eight days' work when hopelessly queenless is much better. If, during this second period, the colony is permitted to rear another crop of cells, the result will not be nearly so good, thus proving that a colony hopelessly queenless will work with greater energy than one of equal strength still possessed with the swarming impulse. The third period of eight days after re-queening is when the greatest energy is shown. During this period, with the largely-increased strength of the old colony, it far surpasses the natural swarm in results. The loose honey occupying the nearly broodless brood-nest is rapidly transferred to the surplus receptacles, and with honey coming in from the field, very satisfactory progress is made." (P. H. Elwood, in *Review* for April, 1889.)

"After May 1 we get bees, and keep getting bees. The more bees we get, the happier we are. About June 5 or 10, I watch the honey-flow, and anticipate as nearly as possible when the flow will begin; but I keep getting bees, and, if possible, have every comb in each colony full of brood. If the flow is expected to begin June 15, about June 8 or 10 I put a super on each colony. The bees loaf in it, and get used to it as part of their home.

"An apiary in such condition will (especially if the honey-flow comes suddenly) prepare *en masse* for swarming. Just as soon as the flow begins I hunt out each queen, and take with her enough bees and one comb of brood to make a nucleus colony. I then clip out every queen-cell that may be started. It won't do to miss one, even if it is necessary to shake the bees from every comb. On the eighth or ninth day remove every queen-cell from each colony, leaving them hopelessly queenless.

"It will answer to leave one cell, and allow the bees to re-queen, yet I prefer not to do so. The first objection is, that many of those cells are from three or four days' larvæ—we don't want such queens. The second is, that the swarming fever is not entirely off, and some colonies make a feeble attempt at swarming when the young queen goes out to mate. For these reasons, instead of re-queening in this way, I leave the colony hopelessly queenless for four or five days before giving a cell. If left a week or more, laying workers begin to appear, and they are perfect nuisances." (R. C. Aikin, in *Review*, April, May, and June, 1892. See also an article in *Review* for May, 1891, page 125.)

"The success of the apiarist lies in having only strong colonies to gather honey—the stronger the better. Concentrate that strength; instead of running the same bees in two hives, run them in one, and it brings in the surplus. It takes but few bees to run a brood-chamber and make a colony sufficient to winter over, but three to five times as many are needed before they can do good work in the supers." (R. C. Aikin, in *Review* for May, 1892.)

"This is not all theory with me. By observing Doolittle's teachings to have a hive full of bees during the honey-flow, I have not failed, save once in fifteen years, to get a fair crop of honey. I seldom get less than 50 lb., and usually 75 to 100, and one season 227 lb., as an average per colony, spring count." (R. C. Aikin, in *Review* for June, 1891.)—ADRIAN GETAZ, in *American Bee Journal*.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of Advertisements).*

A QUEEN MONSTROSITY.

[1797.] I write you a marvellous tale about a wonderful queen bee, which was born at Sinnington, a village not far from Pickering, Yorks, in the month of June, 1893. In this

pretty little village resides an old bee-keeper, who, six years ago, when I first commenced keeping bees, was noted as having the largest and best-kept apiary in this part of Yorkshire. At that time he farmed over 40 hives, *i.e.*, moor-hives, with bars about 13 in. long by 6 in. deep. This, I presume, was to get over the difficulty of vibration caused by long journeys in a cart to the moors. I got four of these hives before I understood much about bees, and it was my first payment on account for knowledge. However, to return to the tale, I give you it in pretty much the old bee-man's own words. "The queen bee," he said, "was from an old stock, which swarmed the first week in June. Then at the ninth day, as usual, I went to listen to her calling up for the second swarm; I saw an extra rush of bees which very soon went back, but I kept on watching at the hive for some days, but saw no more until a month or six weeks after, when I took the cover off the hive, and what should I see but a hat full of dead bees and this enormous queen amongst them! I came to the conclusion that for some reason or other she could not get out of the hive at the entrance, as I am positive she would have swarmed, so had found her way up above the quilt and starved to death with all the bees with her."

Some time after the above conversation took place the narrator made us a present of this monstrosity for our collection, and as I had never seen the like before, nor heard of such a one, I thought I had better write you in order to ascertain if this was of common occurrence. The following is a rough measurement:—Length of bee from front of head to tips of wings, $2\frac{1}{2}$ in.; length of outer pair of wings from articubation to tip, 2 in.; length of inner wings from articubation to tip, $1\frac{1}{4}$ in.; breadth at widest part of wing, $\frac{1}{2}$ in.; length of abdomen from thorax, $1\frac{1}{4}$ in.; breadth of abdomen, widest part, $\frac{5}{8}$ in.; the thorax itself is $\frac{1}{2}$ in. broad by $\frac{1}{2}$ in. long; length of head from thorax, $\frac{3}{8}$ in.; width across eyes, $\frac{3}{16}$ in.; length of antenna, $\frac{5}{8}$ in.

If all queens were like this there would be no difficulty in finding them when driving. The question would be who dare pick them up! So far as one can judge she is a perfect bee in every respect. I have not compared the parts in detail, but when I do will let you know the result.—N. & E. R.

[If our correspondent will forward to us the queen bee (?) referred to, we will probably be able to clear up the matter so far as the "monstrosity" is concerned.—EDS.]

NOTES BY THE WAY.

[1798.] The weather is more settled; warm, sunny days, with frosty nights, has been our experience during the past week; bees busy during the day, a fair quantity of natural pollen being carried into the hives; saw first bumble bee to-day—Easter Monday; killed several queen wasps in wraps of hives last week when taking a peep at the contents. Mr. Bois' interesting article (1779 p. 94) on question "Do Bees Hear," leads us to the conclusion that they possess senses that we do not, but I think investigators in all branches of animate sciences come to the conclusion that the brute creation have senses adapted to their particular form of life, differing considerably from each other, yet contributing to the perpetuation of the species. No one will question the many evidences of ratiocination in the insect world even in the minor forms of life.

Queenless colonies should be united to the next stock, a little flour sprinkled on each lot of bees to be united takes the fight out of them, and the combs can be given as required to other colonies, or can be used as stimulators for the colonies by placing a comb uncapped behind the dummy, and carefully covering same with a wrap to prevent bees getting to it except under the dummy from the inside of the brood-chamber. Swarms will soon be looked for by those following the Simmins' stimulating plan. Let us have facts, friends, for or against the system. I get a good few inquiries from novices or beginners in bee-keeping asking prices of stocks on frames. To these inquiries I give nearly all the same advice—buy swarms. Why do I do so? Well, I will give a few reasons why I should always advise swarms for a beginner. 1. The swarm is easily introduced into the hive. It comes at a season when the utmost efforts of the bees are put forth to secure a surplus of honey for winter sustenance. 2. The bee-keeper starts the apiary with new hive, new combs, and is consequently for several years in the possession of a stock at its best. 3. The purchase of a swarm from a distance is one of the best preventives to the spread of foul brood; the swarm starts off gorged with new honey from the fields, is confined in a box for two or three days, and when it reaches its destination the swarm is put into the new hive on foundation, and thus, as I contend, even when swarms are sent from tainted districts, the chances are for the future healthiness of the colony. 4. When stocks are sent per rail on frames, there are many risks even with careful packing. The queen may get injured in transit, and part of the brood may get damaged, so that the future progress of the colony will be considerably retarded. Then when sudden changes occur there is danger of chilled brood while on the journey. I could name other reasons, but I think the above will be enough to convince the careful bee-keeper that to commence well a swarm is the initial step in successful bee-keeping.—W. WOODLEY, *Beedon, Newbury.*

DO BEES HEAR?

[1799.]—This is a question which has often forced itself on my attention, and, as Mr. P. Bois suggests, can be better discussed in the quiet months of the year; taking his hint, I'll

endeavour to give a few of my observations on he subject.

The question had suggested itself to me long before I knew that it had occurred to others. There exists a custom among skeppists in this neighbourhood, and I have no doubt the same is common to other neighbourhoods, of tinkling a pestle and mortar, or a tin pot or can, while bees are swarming, in the belief that the noise arrests the attention of the bees, and causes them to settle instead of continuing their flight, to the loss of the owner. One seems very much inclined to laugh at the utility of such a practice, but when it is considered how many hives swarm and are captured on Sunday mornings as the bells ring out for service one is inclined to ask what connection can there be between the swarming of the bees, as far as arresting their flight is concerned, and the sounds from the tinkling of cans and the ringing of the bells? If sounds have anything to do with it, and bees cannot hear, it must be from the vibrations which sounds make in their passage through the air. If we put our hand on the pipes of an organ we become sensible to such vibrations when that instrument is being played, and if God has denied these creatures the sense of hearing, he may have given them this sense of feeling to such a wonderful extent as to make up for it. We know how wonderfully sensitive must be their powers of feeling to enable them to collect the infinitesimally small particles of pollen from the stamens and anthers of flowers which they visit. Another point has come under my notice with regard to this sense of feeling; it scarcely matters how lightly you tap the hives when the bees are not in a state of torpor, you will be sure to hear a buzzing sound from them, yet they do not seem to take any notice when one engages in ordinary conversation near the hives. Mr. Bois seeks to prove that bees do hear by instancing an experiment he has made by shaking some bees from the frames of a hive on to a floor in a dark room, and by finding that they are all able to make their way to where the queen is; but may not this also be a matter of feeling the vibrations of the kinds of sound made by the bees when they have their queen with them?—W. H. B. Catford, *Axminster*.

THE "WELLS" SYSTEM.

DIFFICULTIES WITH PERFORATED DUMMIES.

[1800.] To-day I examined my six stocks in frame hives, and found brood (some more, some less) in all of them. Some were well stocked with honey, and others almost on the verge of want.

In the autumn I adjusted a combination hive on the "Wells" plan, and obtained a perforated divider from a well-known dealer; but I find all the holes tightly propolised. I consider this divider is a failure in view of the purpose intended.

Doubtless the divider supplied by Mr. Wells is the sure thing, but I find that what he supplies does not exactly fit the hives of the best makers. It is difficult to adapt even to an eighth or a quarter of an inch, because of the strips of tin on the sides and bottom corners. These would scarcely stand much filing before you would spoil one. I favour making hives to fit exactly his divider, rather than altering the divider to fit the hives on hand. A little makes a difference that would be awkward, if not fatal.—An Enthusiast, *March* 17.

[Our correspondent must surely be in error in supposing that the "Wells" divider will not fit any hive made to take standard frames. We are quite sure it will fit any properly-constructed hive, whether by the "best" or any other maker. Will our correspondent kindly measure his "Wells" divider and say if it is not 14½ in. by 9 in.?—Eds.]

"THE WEATHER AND THE BEES."

[1801.] Under the above title, a letter appears in your issue for March 15 (1785, page 106). In it a "Man of Kent" speaks of a young recruit having the bee fever "hot." Well, I suppose, Sir, that you are doing your best to spread the fever, but "Man of Kent" throws a wet blanket over this particular patient; a very unwise thing to do with a "fever" patient, is it not? However, I do not think he can do much worse than his neighbour bee-keeper with "no honey" and "no swarms," or, at least, only two swarms from fifteen stocks. As I believe I know who this "Man of Kent" is, and also the "Young Recruit," will you allow me to say that, although only "a beginner last year," he does not take in the B.B.J. and *Record* for nothing, but gives some of his spare time to the study of what is therein, as well as making "Wells Hives" upwards. Perhaps those who have failed in keeping bees in frame-hives in the neighbourhood did not have just scales and weights, and so made mistakes in syrup and candy making. "Young Recruit" intends to try what he can do, although the start has been bad enough, respecting the said "Wells hives" upwards. That they are rather heavy, I admit, but they only consist of stand with floor-board 10 in., body for brood 9 in., shallow body 6 in., lift 6 in., and cover; and his experience this winter has been that the only stock he has lost so far has been in a hive he bought new from a well-known maker, which hive also is the only one out of eleven that let in any wet.

And now, Sir, as you invite opinions (on p. 105) respecting honey labels, I think it would be a good plan for the B.B.K.A. to get out a label and show-card to issue to all the associations at a small charge over cost price; there would then be uniformity of labels all through the country at a minimum of cost; for, if purchasers get used to a label in one county and then remove to a different county they would be more satisfied if they found the

same kind of label they had been used to before; this would be the case whether it is in respect of honey or other goods.

With respect to associations and their finances, I think our friend Mr. Woodley hits the right nail on the head in his "Practical Notes," on pages 28 and 29 of *Record* for March, *re* cottagers. I cannot see how an association can avoid bankruptcy if you continue to give 5s. for 2s. 6d. or less. And yet I find that "cottagers" in the Kent Association have more privileges than an ordinary member, and in many cases an ordinary member may not be in such good circumstances as a "cottager." And now, Sir, I think I have had a good say, considering I am not in the habit of writing to papers, and therefore subscribe myself IGNORAMUS, *Tonbridge, March* 20.

BEE ASSOCIATION AND HONEY LABELS.

[1802.] Being fortunate enough to hear the views of bee-keepers on the honey label question after the annual meeting in London, I should like to express my opinion of the great indebtedness of bee-keepers to the Berks Association for bringing this matter to perfection. We had a committee meeting of our association in Leicester the week following, and I suggested the matter to them, with the result of it being unanimously adapted, one of our committee who was present being asked to design a label, a specimen of which I send you. We are having a block of same prepared, which will be printed in report, and one of which we shall be pleased to send you for illustration if you think well to have it.

As a guide to cost I may say our quotation for labels as sample, but wider and printed with secretary's name, &c., on, is 20,000 for £6. We have also an offer of 1,000 transparencies for £7. This may be a guide to some association.—W. P. MEADOWS, *Syston, nr. Leicester.*

[Sample sent is a very nice label indeed.—EDS.]

HONEY LABELS.

[1803.] I send herewith specimens of honey labels and members' cards used by our association, such as are, I think, suitable for a small association like ours (fifty members).

Hoping the question of labels will be decided in good time for the coming season.—G. W. SWORDER, *Hon. Sec., Bishop's Stortford and District B.K.A.*

[On back of member's card sent is printed the following:—"Special Rule.—The holder of this card undertakes to supply only pure British honey, which has been gathered by the bees in the natural way, and that no sugar syrup has been used as food for the bees during the time this honey has been collecting. Any breach of this rule will entail forfeiture of the card and expulsion from the association." And the "honey label" has on it as under:—"The contents of this package are guaranteed to be pure English honey. Any complaints as to quality to be made to Mr. G. W. Sworder, Secretary, Bishop's Stortford and District Bee-keepers' Association."—EDS.]

AFTERNOONS WITH SOUTH AFRICAN BEE-KEEPERS.

NO. I.—MR. L. H. ATTRIDGE.

[1804.] A letter to the Editor of the BRITISH BEE JOURNAL informing him that I was about to start on a trip to South Africa, and asking him what he could tell me of bees and bee-men out there. A speedy reply with the names and addresses of several bee-keepers in all parts of the Colony. Such is a courtesy which every bee-man knows he may expect from another.

A voyage of three weeks, with a stop at St. Helena—where I said "Good-day" to several bees that were busily engaged nectar-gathering, but was far too much intent on reaching Napoleon's tomb to spend any time on improving my casual acquaintance with them—and I found myself at Capetown once more. It was the end of December when I arrived, and therefore nearly midsummer, January out here corresponding to June at home. Three weeks passed, during which I was too busy with other matters to think about bees, and then I remembered our Editor's letter. Hastily unearthing it from the recesses of my writing-case, I found that one of the apiarists mentioned lived at Sea Point, a suburb about two miles from Capetown. Without delay I despatched a letter asking if I might see this apiary, and by return I received a reply from the owner, Mr. H. L. Attridge, with a most cordial invitation to come over on the following Saturday. Promptly at the time appointed I arrived, and as I entered the garden Mr. Attridge came forward to meet me. Before proceeding to look at the bees we sat down in the cool shade of the verandah (or "stoep," as they call it), which runs round all the houses out here, and had a chat about bee-matters in general. In many ways, Mr. Attridge told me, the condition of bees just now corresponds to their condition during the winter at home. The long drought of summer has parched up the vegetation, as it always does at this time of the year, and honey gathering is absolutely at a standstill. There is no brood—or at any rate not more than a few square inches—in any of the hives, and the bees, instead of working all day, only come out very early in the morning and again just before sunset. In the Eastern Province, Mr. Attridge said, matters were different, for there they got their rains during the summer, and consequently honey was to be obtained just now; but in the neighbourhood of Capetown the rains come entirely during the winter and early spring. In winter the weather is usually too cold to tempt the bees out a very great deal, and for the same reason but little

nectar is secreted by the flowers, of which there are an abundance—principally bulbous rooted kinds—in bloom at this time. Nevertheless, the bees manage to obtain sufficient honey all through the winter to enable them to breed at a most rapid rate. They commence to do this in the latter part of March, when the tall aloes come into bloom. From this time until the beginning of September the amount of honey gathered is rarely more than sufficient to supply the requirements of brood rearing, and consequently nearly every cell in the hive is empty and available for this purpose; moreover, the South African queens are exceedingly prolific, and seldom allow an empty cell in the hive. Thus, by the beginning of September, every hive is boiling over with bees in a manner which we English bee-keepers have no idea of.

Mr. Attridge showed me a photograph of two hives, taken during the winter. In both cases there were huge swarms of bees clustering on the outsides of the hives, around the large porches. I should say that there would not be less than 3 lb. of bees in these clusters, and there are far more bees inside than there are out. These cases are the rule, not the exception.

When the honey flow really begins, the bees, if left to themselves, will still go on breeding at this tremendous pace; but experience has taught Mr. Attridge that it is not good policy to allow them to do so, and he has made it a practice to confine the queen, by means of an excluder dummy, to the six frames at the front of the combination hives he uses, leaving the portion behind for storing honey, as well as the space above, which is sometimes occupied by shallow frames, and occasionally by crates of sections, though for several reasons Mr. Attridge does not find these latter so desirable out here as shallow frames.

The first hive we examined was one which possessed a rather curious history. The queen was a young one, and at the age of seven weeks she had not laid an egg, and was, therefore, Mr. Attridge thought, not fertilised. A week before my visit, however, when examining the hive, he had discovered a good-sized patch of eggs in one of the frames. The question that naturally rose to his mind was whether or not the queen would prove a drone breeder. Upon examining the hive together, on the occasion of my visit, we found all traces of the eggs had vanished. There was a little honey in the hive, though not much, and one would naturally have been led to suppose that the bees, having been so long deprived of eggs, would have tended these with especial jealousy, instead of thus destroying them. The question that occurred to Mr. Attridge was, whether this could be a case of sterile eggs, such as Professor Cook mentions. Anyway, he came to the conclusion that the queen—which was, to all appearances, a fine, large, fully-developed one—was worthless, and must be replaced as soon as possible, for the stock has now dwindled down till it only covers about six frames.

South African bees vary considerably in colour. Not only are some stocks much brighter than others, but in the same hive some bees are much brighter than the rest. They are slightly smaller than blacks, slim, and strongly built. The thorax is yellowish-grey, quite as light as a Carniolan, but more yellow. The abdomen has sometimes three, sometimes two, and sometimes only one orange band, while occasionally one comes across a bee without any yellow band at all. In general, they very closely resemble Ligurian hybrids, and they stick to the combs during a manipulation in the same characteristic way. Mr. Attridge handled them with as much care as one would give to a hive of Cyprians or Syrians, and under this treatment they were perfectly quiet and tractable, even throughout long manipulations.

After seeing the apiary we went to an out-house at the back, devoted to bee-appliances, and inspected the extractor (made in the Colony), the foundation, and other odds and ends. Mr. Attridge recently imported a machine, and I think he may well be proud of the foundation—both prood and super—that he makes. The samples that I saw would be considered very fair in England, while the wax of which they were made was far above the average.

It was with not a little regret that I had to say good-bye to my kind host at the end of a long and most pleasant afternoon; and I left with a hearty invitation to come and see the bees again later on, when the honey gathering commenced, and with yet one more instance of that unfailing and proverbial kindness which apiarists invariably meet with from their brethren throughout the world.—G. Gordon Samson, *Cape Town*.

Queries and Replies.

[981.] *Bee-keeping for Profit.*—For some time past I have been thinking of starting bee-keeping as a means of increasing my income. I have no room at my home, but some friends living in the country with a large garden about one mile and a half from where I live will allow me to keep some bees there. I understand they do not require a lot of time for looking after them. 1. Kindly favour me with a reply stating whether you think I could make them pay under the above circumstances? 1. Perhaps you can also me tell the name of a good guide-book, suited for the novice, containing all necessary instructions from beginning to end?—S. J. H., *Trowbridge*.

Reply.—1. There is no reason why a few hives might not be kept with profit under the circumstances stated, presupposing that your

friends are able and willing to give such attention to the bees as is required in the swarming season. Without this help there would be the almost certain loss of swarms, besides other possible mishaps; in fact, to leave bees without some little supervision during the busy season will inevitably lessen the profits to be got from them. 2. Cowan's "Guide Book."

[982.] *Working "Wells" Hives.—Raising Queens.*—I shall be glad if you will answer the following small batch of queries:—1. Would there be any advantage for storing more honey in putting two stocks now into a "Wells" hive than leaving them singly? 2. I want to raise young queens for my stocks. Would you feed with syrup the strongest colony now and on through April, and when a swarm issues kill the three-year-old queen, and then divide up in a nucleus hive? 3. Is there any remedy for restoring mouldy combs, or is it better to destroy the affected part only? 4. Can you suggest a platform for bell-top skeps on which I might put a box of combs for extracting honey?—ENTHUSIAST, *Glos.*

REPLY.—1. This is entirely a matter of opinion. Mr. Wells' own reports are printed in our pages, and, strictly speaking, his system should be judged by his own results. On the other hand, some who have tried it declare the advantage of the double-queen system to be less than is claimed, just as there are others who report most favourably of it. 2. If we were trying the double-queen system we should raise queens as recommended by Mr. Wells—dividing the brood and bees of the parent stock after swarming into nucleus colonies, and allowing a queen-cell to each. 3. See reply to 976 and 978 on p. 119 last week. 4. A light square board of the required size, with a leg at each corner cut to the proper length, is all that is needed, except seeing that the super is well weighted down when put on to steady it. A hole in board cut to correspond with that in crown of skep will admit the bees, and on the upper side of board may be fixed a square of excluder zinc. Care should be taken to pack the junction of board and skep, so as to keep out the cold from super.

[983.] *Allowing Bees to Transfer Themselves.*—Last autumn I bought a stock of bees in a very old skep, and towards the end of last month I placed the skep upon the top of the frames in a bar-frame hive. Some of these frames in the latter were filled with comb, others with foundation. 1. How long will it take the queen to work her way down below, so that I may safely put on excluder zinc, and remove the skep? The bees have worked busily this month through the entrance of the hive—in fact, began to do so almost at once. Pollen is going in in large quantities. To-day (March 26) I lifted up a cardboard box in which I put a pound of candy a month ago, and found that the bees were building comb in it. I gave them two more frames with foundation to fill up the whole of the hive. 2. Should I now give them a super with sections or a box of shallow frames with foundation so as to get them worked out? There is a good show of fruit blossom about here.—OESTRENSIS, *March* 26.

REPLY.—1. It will depend on the prolificness or otherwise of the queen, but we should not set the excluder on until such time as the bees have entered into full possession of the lower hive and brood is plentiful therein. 2. When the frames are all fairly covered with bees the surplus-chamber may be given.

[984.] *Transferring Old Combs from Skeps.*—I have just received a strong stock of bees in a skep. Would it be most to my advantage to transfer in April to bar-frame hive, or to wait until they swarm, and then transfer the old stock?—F. O., *Kent, March* 20.

REPLY.—We strongly advise stocking the frame-hive with a swarm, rather than transfer the old combs from skep to it. Nor would we transfer the old combs from the latter after the skep had swarmed. Our plan would be to allow the skep to swarm a second time after the usual interval of eight or ten days, and return the swarm the following morning. The surplus queens would thus be got rid of. Then twenty-one days after the issue of first swarm, drive the whole of the bees from skep, and, after setting a frame-hive on the stand whereon the skept stood, run the bees into it as a swarm, and let them build new combs. The old combs in skep will only be fit for melting down.

[985.] *Backward Colonies.*—1. One of my stocks of bees appears to be very weak; they take in very little pollen, and seem to linger about the mouth of the hive; they have plenty of stores. What can I do with them? They gave me very little surplus honey last season. If I uncapped some of their stores would it stimulate them? or would a flour-cake improve them, and a little syrup? 2. When is the best time to re-queen? — AN ANXIOUS OXONIAN, *March* 24.

REPLY.—1. The combs should be examined forthwith, as the symptoms point to either disease or a worn-out queen. 2. There is little use in re-queening a "very weak" stock, and if the bees are diseased, we fear no good at all can be done with them.

[986.] *Markings of Hybrid Bees.*—I am sending you by to-day's post, in tin box, two live bees (alive when sent off). Are they the progeny of the same queen? 2. If so, is the difference in the marking of them (you will see one has a reddish band and plainer stripes on its body) accounted for by the respective ages? 3. If not of same blood, what cross has occurred in the one with the red band, as

they are both out of the same hive? 4. If crossed, will the bees in hive gradually change from the ordinary black to the other, or *vice versâ*, as at present? The banded bees seem to be in a comparatively small minority.—HARTWOOD, *Runshaw Hall, Lanes, March* 19.

REPLY.—A general reply may be given to all the above queries as follows:—Bees when received were soaked in the liquid honey contained in box, and, of course, dead. Just sufficient of the markings, or bands, was, however, discernible, to show that they are Ligurian hybrids; and, regarding these, it may be said that in the bees of one stock will be found several varieties in marking so far as "bands" go, just as in one human family will be found children with hair of different shades. The distinctness in colour of bands also changes according to the age of the bees. When quite young, the bands are distinct in colour, but as they lose their pubesence (or hairiness), the bands become duller and less distinct.

[987.] *Moving Bees.*—I have to move my bees about 150 yards from their present stands, do you think if I removed them about a mile away in the first instance, and left them there for a fortnight or thereabouts, and then brought them to their new locality, that I should lose many? I might mention that they are now flying freely.—J. B., *Plummer's-plain, near Horsham.*

REPLY. — Yes. The temporary removal proposed will quite avoid any risk of loss.

Echoes from the Hives.

Beemount, Stoke Prior, Worcestershire, March 24.—Fruit trees are now assuming a white appearance. Although not so forward as a year ago, yet I consider they are quite forward enough. Temperature has not yet been very high this month, 55 degrees on Good Friday was the maximum. The maximum for March, 1893, was 63 degrees. A few frosty nights thermometer fell to 23 degrees—the minimum—on the 15th inst. Three nights this week I have heard three of my stocks merrily humming at 9.30. I expect to have a look at my stocks next Saturday, the 31st inst., and hope then to find the majority of them ready to take a few extra frames, and intend putting a crate of shallow frames on the strongest ten days or so later, should the weather, &c., prove propitious. A friend of mine who resides at Bromsgrove tells me he saw a drone issue from one of his hives last Sunday, March 18. Very early for such a sight, was it not?—PERCY LEIGH.

Bee Shows to Come.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries close May 31. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries close May 1. Post entries at double fees till May 12. Secretary, John Huckle, B.B.K.A., King's Langley.

PREVENTION OF ROBBING.

The first thing to be done by way of preventing robbing is to take every precaution against the possibility of it occurring. Here is where the beginner is the most liable to err. Entrances to weak colonies are often left open full width, hives opened in the middle of warm days, or honey left scattered about in such a manner as to entice the bees to rob, rather than use methods to restrict the natural propensities of bees to rob each other. A man once came to me with the complaint that his neighbours' bees were robbing his, and wished I would go and see that neighbour and see if he would not shut up his bees before they "cleaned his entirely out." I told him I would go home with him and see how things were there before I went to the neighbour. On arriving I found his one hive set up on half-inch blocks all around from the bottom-board, while in a dish a few feet away was a lot of comb that had the appearance of having contained honey an hour or two before. I asked what that dish of comb meant. The reply was that he thought perhaps the bees did not have honey enough, so he set out a little to feed them. I told him that, should he leave all the doors of his house open at nights, scatter a few twenty-dollar gold pieces around by the gateway, and let it be known that he had thousands of dollars in the house, he would not expect it would be long before there would neither be gold by the gateway nor in the house; and yet he had placed his bees in the same position regarding other bees that he would be placing himself and his gold in regarding any thieves that might be prowling about should he do as above. Without carrying this story further, I wish to say that the first means, looking toward the prevention of robbing, is to know the condition of the colony as regards its numbers before any really warm days come in the spring; for if a colony is weak in numbers it is almost sure to be robbed out unless extra precaution is taken. Again, if a colony is queenless and broodless in early spring, that colony is almost sure to be robbed; and if robbing is once started on such colonies a general row may be expected throughout the apiary. I make it a point to look at each colony some cool day in early spring to see how many spaces between the combs they occupy, the number of which is set down where I can see it at a glance. Now, suppose the colony occupies from five spaces between the combs upward, I call that colony a good one; and to each good colony I allow an entrance during the spring months, say, 3 in. long by $\frac{3}{8}$ in. high.

If the colony occupies only four spaces, the entrance given is 1½ in. If it occupies only three spaces, only ¾ in. is given, and I rarely contract an entrance more than this. It is easy to say "Contract so that one bee at a time can just get through," but whoever so contracts will find that trouble comes by way of dead bees being removed from the hive, for such cannot be drawn through this space, and consequently the entrance is stopped up entirely. If the cluster in any hive does not occupy three spaces to a sufficient amount to enable it to care for itself, or occupies less spaces, then all the combs are taken away except one of honey and one for brood, and a division-board is inserted, placing the comb of honey next the side of the hive, the comb for brood next this, and the division-board next the comb for brood, while the entrance, of about the size of the smallest given above, is placed at the opposite side of the hive, so that the bees in going out and in must travel over the vacant space between the division-board and the entrance. Fixed in this way a colony must be so weak that it is good for nothing if it does not protect itself from robbers.

As proof of the effectiveness of this plan I will say that I have not had a colony robbed since I adopted it, and it is rare that any attempt is made to rob even weak nuclei. If a colony is found queenless, supply it with brood from some other colony till you can procure a queen for it, providing it has plenty of bees. It it does not have plenty of bees, unite it with a colony having a queen. Now, if through careless handling, or from any cause, robbing is started, I think the best thing to do first is to throw a sheet over the hive that is being robbed, fixing it all around on the ground so that no bees can crawl under it. In half an hour suddenly lift it from over the hive so as to let the robbers which have collected on the under-side out, and the bees from the colony (shut out by the sheet) go in. Replace the sheet for another half-hour, when it can be removed, a handful of dry grass or hay put over the entrance, and another handful of wet hay put on top of this, which will allow them to dwell in peace the rest of that day, as robbers do not like to crawl down through wet hay.

Now, as I said, this will stop the robbing of any colony good for anything where the entrance has been fixed as above; and, with one exception, if a colony will not take care of itself the next day after being treated as I have given, I would take the combs away from them, allowing the few bees to go with some other colony rather than to run the risk of having the whole apiary demoralised by the bees taking the honey from the hive at some time when we were not present to stop it. The exception above alluded to is where a colony may be very weak, but have a choice queen that we wish to save, but have no place to put her just at this time. Should this be the case, treat the colony to the sheet and wet hay as given above, and when night comes carry such colony to the cellar, and keep it there till you can use the queen. If you are very anxious to build the colony up, and it is strong enough to live in the cellar till the bees can gather pollen, it may then be set out and given some hatching brood to strengthen it; for after the bees secure natural pollen freely the disposition to rob seems to leave them to a great extent.

I have been thus explicit in this matter, for there is no one thing so vexatious in the spring as the robbing of bees.—G. M. Doolittle.—*Condensed from "Gleanings."*

TRADE CATALOGUES RECEIVED.

John H. Howard, Holme, near Peterborough.—Mr. Howard re-issues his very full and complete list of last year, with several pages descriptive of some important novelties for 1894. These latter include a new "Wells" hive with perforated dummy of a "corrected and approved pattern," together with new forms of supers, wide frames for surplus chambers, &c., the whole being profusely illustrated.

George Neighbour & Sons, 127, High Holborn, London, W.C.—Judging from the compendious list of bee goods, 72 pp., now issued, this old-established firm seem determined to keep in the forefront of appliance dealers; and with Mr. James Lee at the head of the machine shop and manufacturing department, the excellence of the work sent out is assured.

The Falconer Manufacturing Co., Jamestown, New York, U.S.A.—Messrs. Falconer's will be chiefly useful in this country for wholesale buyers purchasing hives in the flat. It comprises an immense variety of bee-goods, and the reputation of the firm for good work is well kown on this side the Atlantic.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

H. J. W. (Shifnal).—*Broodless Hives in March.*—Unless the stock be very weak indeed, or the queen aged and nearly worn out, it may be reasonably assumed that hives containing no brood or eggs in March are broodless.

J. H. Moore (Welshpool).—*Transferring Bees and Combs from Skep to Frame-hive.*—Kindly read reply to 984, p. 128.

A. L. (York).—*Bees and Confectionery Works.*—Unless the proprietor of the works referred to was willing to cover the windows with wire gauze we should not advise keeping bees in such close proximity to a place of that kind. The bees would not only be a nuisance to those working, but they would be destroyed in thousands each year by their persistence in visiting the place.

Editorial, Notices, &c.

USEFUL HINTS.

WEATHER.—Quite summer weather has prevailed in most parts of the United Kingdom for several weeks, and seems likely to continue. Moreover, the night frosts referred to in our last "Hints" have disappeared, and with them the risk of present damage to the fruit bloom now showing in abundance, while the addition of a few warm April showers coming just when wanted has tended to make all vegetation put on a most promising appearance. As a result of these very favourable Eastertide conditions bees are doing well everywhere we hope, but certainly here in the south.

STIMULATIVE FEEDING. — The fine weather has also had so stimulative an effect on the breeding propensities of prolific queens that stores, if none too plentiful, will be soon reduced to dangerously risky condition—in consequence of the heavy drain on the food through brood-rearing—if not supplemented by the feeding-bottle and a supply kept continuously going. As to the choice between syrup and soft candy for feeding at this season, preference should be given to thin syrup (warm when put on) so long as the bees are taking daily foraging flights; but if candy is made so soft as to be readily consumed by the bees it will answer very well. It is the very hard candy which is so objectionable as bee-food at this time for stocks of bees almost on the verge of starvation.

ARTIFICIAL POLLEN.—Beneficial and exceedingly useful though it undoubtedly is to give pea-flour to bees as nitrogenous food in places where during the early season pollen is scarce, or altogether absent, some discrimination must be used in this particular item of spring stimulation. It must be borne in mind that natural pollen is, and has been for weeks past, so abundant in many districts that giving the artificial article in large quantities, as some inexperienced bee-keepers do, is not only taking useless trouble, but is positively mischievous and harmful, as filling up with a substance of no use to the bees thousands of cells which would otherwise be filled with brood, to the advantage of the stock. There are scores of districts where, as we have said, natural pollen is so plentiful that combs have to be destroyed annually in consequence of being rendered useless by it. Not only is this so, but the unwary bee-keeper is often deceived when calculating the amount of store in his hives by combs heavy with what has every appearance of sealed honey, but which really contain only pollen, with a thin layer of honey on its face, artfully placed there by the bees before sealing the cells over to preserve it from becoming unfit for use.

RE-QUEENING. — Following on the accounts of early drones, we now have reports of swarms in March, and learn of hives being in very forward condition in many places. If—as is foretold—the coming summer is to be much the same as that of 1893, plentiful swarming may be looked for as a result of the non-swarming of last year, by reason of their being so many old queens now at the head of stocks. In view, therefore, of this, it will be well to prepare for coming events by thinking out plans beforehand, and arranging for the re-queening in autumn of such stocks as did not swarm last year, and are headed by queens now in their second season. This may be done by giving surplus room in the usual way, and allowing the bees to swarm naturally. After hiving the swarm remove the surplus chambers, and divide the bees and combs of the swarmed stock into about three nucleus colonies, giving to each a fair portion of the queen-cells, bees, brood, and food, and caring for them in the usual way. Then prepare a frame-hive for the swarm; set it on the original stand, and—after again fixing the queen-excluder above the frames—replace the surplus chambers and return the swarm to the hive so prepared. Supposing that, say one in every three stocks will swarm naturally in this way and are so treated, sufficient young queens will be on hand to re-queen every stock needing it at the close of the honey season, and this with a very small diminution in the honey harvest.

SEASONABLE HINTS. — As Spring advances time becomes more precious,

and everything which can be got ready now will save time in the future—sections, supers and frames may be fitted with foundation ready for use, and stowed away till wanted. Provide a few rough boxes without top or bottom, made of ½in. stuff. They must be of the same dimensions as insides of the hives used, and are very useful for holding frames fitted with full sheets of foundation or when extracting.

THE BRITISH BEE-KEEPERS' ASSOCIATION AND ITS WORK.

We have received communications from two correspondents, severely criticising the action of the British Bee-Keepers' Association. Of course no objection can be taken to this, but we do wish our correspondents would make some endeavour to master the facts of the case before assuming the office of critics. For their enlightenment we, therefore, desire to explain that the work done by the B.B.K.A. is entirely for the benefit of its affiliated associations, and as a matter of fact, it is the only bee association whose members receive no actul *personal* benefit at all from their subscriptions; its efforts being devoted entirely to the promotion of the interests of British bee-keeping throughout the United Kingdom. But beyond this, it is now the recognised central authority in all matters connected with the pursuit, and we fail to see how the county association could have any official standing without it; therefore it seems to us vital to their interests that the central association should be strong and well supported. To ask "What does the 'British' actually give us for our money?" is, in our view, putting the argument on a very low level indeed; and it is to be hoped that there are still among us some with sufficient philanthropy and public spirit left in them to support the B.B.K.A. for the general good it is doing, without descending to the selfish motive of merely individual interest or profit. If the Central Association had no subscribing members at all it would, we think, be the duty of county associations to give it their support, in their own interest, and we are not without hope that a little calm reflection and inquiry will bring this fact home to our correspondents.

TWO FOUL BROOD PROPOSITIONS.

On page 301 *American Bee Journal*, of September 7, 1893, a request was published to send me specimens of foul brood for microscopical examination; the request was made by Mrs. Jennie Atchley, of Beeville, Texas, whose desire it was to have the subject thoroughly investigated, trusting to me entirely the course to be pursued.

This was the source of furnishing me with specimens of foul brood from several sources, from which I have made more than one hundred cultures. For the benefit of bacteriologists, I will state that the culture media employed were potato, gelatine on plates and in tubes and stab cultures in agar-agar.

Proposition I.—That the queen does deposit eggs in cells containing the dark coffee-coloured dried mass, resulting from the drying of the viscid ropy remains of foul brood, which, though tougher than the wax, yet easily dissolved in water, contains the germs of foul brood with sufficient vitality to produce the disease.

Proposition II.—That honey is stored by the bees in these foul cells, and sometimes capped, thereby retaining the germs of foul brood as long as the combs last; that the honey in these cells is not detrimental to the vitality of either *spores* or *bacilli* which are productive of the disease, and that in such cells the *spores* and *bacilli* are found suspended in the honey still retaining their vitality.

I received from Hon. R. L. Taylor, of Lapeer, Mich., September 11, 1893, the first specimen of foul brood, which contained brood from five or six days old up to sealed brood. On careful examination it was found that the youngest brood was diseased, and in a few cells there was the brown dried mass of foul brood which attracted my attention, and cultures were made from those found in the empty cells, and besides the *bacillus alvei* other micro-organisms were found which I shall merely mention here.

The next important specimen was received from D. D. Johnson, of Summit Mills, Pa. This was interesting as many cells contained the dried mass, the remains of foul brood, though the cells were empty, besides dead sealed and unsealed brood. This was received September 19, 1893.

From C. P. McKinnon, of Bangor, Iowa, September 27, 1893, I received a very foul specimen, which was found to contain the same as the first. Cultures were made from each of these specimens.

No one up to this time had sent me combs containing honey which I had hoped to receive, so I wrote to Wm. McEvoy, of Woodburn, Ont., asking him to send me combs of foul brood with honey in the adjacent cells; and not receiving word from him in due time, I addressed him a second time, stating explicitly what I wanted. He sent me two combs, 6 in. by 8 in., containing brood of all ages, foul brood of all stages, and honey stored by the bees in the adjacent cells, some of which were capped or sealed. It was the foulest mess I ever saw and the foulest smell I ever smelt. Of this specimen I sent to Mrs. Jennie Atchley, of Beeville, Texas, a piece 4 in. square out of the worst, and in a few days received the following regarding its characters:—"It is sure enough *foul*, and as dangerous as yellow fever."

The work of dissecting these combs revealed the same facts as before in regard to the young brood in the foul cells; and, further, in regard to the honey, very few cells were sealed. In nearly all the unsealed cells were found the hard, dark, coffee-coloured mass of decayed foul brood, containing the *spores* and *bacilli* of foul brood. To make sure that I might not be deceived, I carefully examined the cells, every one, which were capped by the bees, and in nearly every instance was found the same hard mass of old foul brood; these were carefully dissected out and examined, and found to contain both the *spores* and *bacilli*, from which cultures were made. With these I had less trouble in obtaining pure cultures, as I had fewer micro-organisms to contend with, which was as I anticipated. My next move was to take the honey dipped out of these sealed cells, without disturbing the cell-walls, and examine with the microscope, which revealed both *spores* and *bacilli* suspended, from which pure cultures were obtained.

After communicating these facts to Mrs. Jennie Atchley and Mr. Wm. McEvoy in detail, they urged me to make known at once the results of my investigations in this line. Not wishing to be in too great haste to rush into print, I carefully went over my work again, taking extreme precautions that no error might be made. I arrived at the same conclusion as before.

In making these last cultures from honey twelve were on potato, six on gelatine plates both excluded from oxygen, and eight stab cultures in agar-agar, each giving satisfactory results.

I am now preparing the manuscript for the entire report of my investigations, to be published in pamphlet form, in which these experiments are given more in detail, bringing to light many more important facts regarding the biology and histology of the bacillus of foul brood, and its pathological relations to the disease, which when fully understood will greatly simplify its eradication.

Appended to this report will be given a review and free examination of the theories held by the writers of the day, in which each one will be treated fairly and honourably, without bitter personalities, but from a scientific standpoint, and should I differ from any one I am willing to go over the ground with them and let further demonstrations prove the right.—Dr. W. R. Howard, in *Canadian Bee Journal.*

A MARCH SWARM.

A correspondent sends a cutting from the *East Anglian Daily Times*, which reads as follows:—"On Good Friday, a hive of bees belonging to Mr. Andrew Adams, of Long Melford, 'swarmed.' The owner followed the migrants, and successfully hived them in Mr. Henry Richold's garden. The occurrence is an extremely rare one; apiarists seldom look for swarms leaving their 'colonies' before May."

Swarms in March are usually set down as "hunger swarms," and rightly so, for bees in normal condition rarely swarm even so early as April. The weather has, however, been so exceedingly summer-like for several weeks past that we hesitate in giving an opinion on the above, and are endeavouring to ascertain further particulars of the case.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The Editors of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "The Manager, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see* 1st *page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

A LADY'S BEE EXPERIENCE.

[1805.] I have been asked to send you my experience in bee-keeping, having been fairly successful in the pursuit. On commencing (in 1891) I was a perfect novice, had never seen bees handled nor yet a swarm of bees. There are a few kept in this neighbourhood, but only in skeps; so, having all to learn, I preferred to begin on the modern system. A neighbour promised me his first swarm, but I had no idea where to get wood hives from. Eventually, however, I was enabled to to call on a well-known Yorkshire appliance dealer, and not only saw his stock, but received from him valuable instruction how to proceed and how to get the best results; in fact, I owe much of my success to his practical advice. The season of 1891 being a late one I did not get my promised swarm till the second week in July. I hived them on full sheets of foundation in a new hive and fed for a few days, but the white clover being in full bloom I then left the bees to themselves, and finding in September they had sufficient supplies, packed them well up and did not touch them till the following spring.

Early in April I gave the bees a gill of syrup daily for a week, then put on a box of shallow frames, and later a crate of sections, and although 1892 was such a bad year, I took 42 lb. of honey from that hive, besides a good swarm, which I placed in a frame hive. The second week in May I also got two swarms from a friend—one I placed in a frame-hive, the other I left in the skep, and it swarmed

in the following July. The summer of 1892 being so windy and wet I got very little honey, but the skep swarmed ; and I had also a cast early in August from a neighbour, who did not want to bother with them ; these I put in a skep and fed them well. So that in August I had three stocks in wood hives and the three skeps ; two of the latter we drove, and, tying the best combs of brood and honey in frames, placed them in a "Wells" hive, along with four frames of honey taken from my frame-hives.

In September I had two strong lots of driven bees given me, one of which I put in a frame-hive, and gave them four frames of honey and brood and three sheets of foundation. The other bees I joined to the two lots of driven bees in the "Wells" hive, as they were not very strong. So that I had seven stocks to face the winter with. I fed them up well in September. I packed the hives well with corkdust cushions for the winter. This completed my bee-work for 1892.

I did not disturb them till the first warm day in January, 1893, when I glanced into the hives, and found all strong, and well off for stores, but, to make quite safe, gave a little candy to each. I did not disturb them again till early in April, when all got a gill of syrup every other day for a fortnight. A little later I put on the shallow frames. On May 3 I had a swarm from one of the skeps, and hived it on sheets of foundation, and a frame of honey and brood taken from another hive, and from that swarm I took over 45 lb. of honey later on. From the seven stocks I began 1893 with I took 450 lb. of honey and ten swarms, one of which flew away after being hived twenty-four hours, and one I gave my man to put in a frame-hive he had made himself during the winter.

The best results were got from the "Wells" hives ; the one with the driven bees of 1892 giving me over 90 lb. of honey, but no swarm. With some of that honey I took first prize at the Yorkshire Show, second at Goole, and commended at the Dairy Show, London, these being the only times I entered it for exhibition.

In another "Wells" hive (fifteen frames) I placed a swarm on June 16, on full sheets of foundation, and two days later another swarm in the other compartment. As honey was coming in so fast, and I was leaving home, I at once put on the excluder and shallow frames. When I looked under the quilt on my return a fortnight later to see how the bees were getting on, I was astonished to find the frames full of honey, and all sealed over. Our honey returns were quite a revelation to some of the old bee-keepers here, and when they heard the result of our first day's extracting, asked my man if I would mind their coming to see the operation next time we extracted. Being only too glad to further the bee-keeping cause if I can, of course they came, and one who had kept bees for thirty years said he could not have not believed it had he not seen it with his own eyes. I tried one or two swarms in bass hives, but shall not do so again —the result in honey is so small, and the mess and dirt of running it out so great. I was fortunate again last autumn in not having to use much sugar in feeding, seven stones being all I used for my thirteen stocks.

We looked through my hives ten days ago and found all in splendid condition as to stores and bees, except in one hive, in which the stores are rather low. Some are so full of honey that if the weather continues favourable I shall not have to feed at all this spring. There is a great quantity of fruit grown in the village—stone-fruit, raspberries and strawberries—so that the bees find plenty of forage.

My Wells hives did not swarm last year, but I think the reason was we had several days of wet and cloudy weather just at the time they were ready, as the bees were hanging out several days.

I send you a photo of my hives, taken on the last day of extracting last year. We are in our bee-veils and working dress, as you will see.

I sold my honey well, getting 1s. per lb. for most, 1s. 4d. for some, and 10s. per dozen 1 lb. jars for the rest, and could have sold much more if I had had it.

I expect I have written more than you will care to print ; but if you find anything to interest readers you might use it.—HELEN LAWRENCE, *Clitheroe House, near Leeds, March* 28.

[A very interesting and satisfactory report, which speaks for itself as to the results obtainable under intelligent management, as evidenced in the above details and in the excellent photograph received, for which we are much obliged.—EDS.]

THE GLAMORGANSHIRE B.K.A. AND ITS CRITICS.

[1806.] The tapping of "Tomtit" has drawn out one of the most esteemed members of the G.B.K.A. (1793, p. 118) to write in its defence. Now, "Tomtit" holds so high an opinion of your correspondent, Mr. Edward Gibbins, that he would actually refrain from tapping *his* hives even if he had the opportunity of doing so ; but, on the other hand, he could easily prove, if necessary, that his honey was of a better quality and was readily disposed of at a higher price than probably he (Mr. G.) obtained at the G. Agricultural Society Show. Our friend thinks it a full and complete answer to the general question of how can we benefit the finances of the B.B.K.A. and more generally interest the bee-keepers of a country by saying in an off-hand manner, "We hold a show once a year."

My reply to this is that is the very least you could possibly do to exist as a society at all. The larger view of how to expand operations

is evaded altogether. I ask again—and in doing so I reiterate the whole of my former queries also—is it a satisfactory state of things that a society should be stagnant when bee-keepers all around it are multiplying in numbers? Is it satisfactory that their meetings should always be held sixty miles away from at least one-third of its supporters, who cannot attend without considerable expenditure of time and money? Are these the unjust charges Mr. Gibbins complains about.

The tinge of lofty pity bestowed on poor "Tomtit" in the last paragraph is wasted, for he has long mourned over the shortcomings of *his* society, which he would delight to see active and flourishing; just now he is peering from the topmost boughs and saying "tweet, tweet," where is the annual report of the meeting held at Cardiff a month ago?—TOMTIT.

"WELLS" HIVES AFTER THE WINTER.—"PLUMPING."

[1807.] The last few days we have had here have been really glorious, the sun being nearly as hot as in July. Plum-trees that two days ago scarcely had a blossom on are to-day in full bloom. The bees last winter practised the strictest economy, having used less honey than in any other winter since I have kept them. Those in the "Wells" hives, after they had apparently settled down for the winter, stored the majority of their food in the combs nearest the perforated divider, in many hives completely emptying the outside comb, although the honey in it was sealed over. Instead of the two colonies forming one winter cluster with the divider in the centre, they each form one in the centre of their own combs; and, what is still more strange, they extended their brood-nest in the usual way, not as I expected they would do—begin breeding on those combs nearest the perforated dummy.

Nuclei clustered on either side of the dummy, and began breeding on those combs next to it. This behaviour was not caused by my dummies, as the same thing occurred in the hive containing the dummy Mr. Wells was kind enough to send me; by the way, the holes in this dummy are also blocked up. I find it necessary when manipulating to give a glance at the entrances now and again, as those bees being operated on are apt to walk into the adjoining colony. A little carbolic acid placed in the centre of the floor-board soon put a stop to this. March has gone without hearing of any swarms. I hope those who have given Mr. S.'s method a trial will give us the benefit of their experience.

The colony mentioned in my last (1766, p. 76) was not, as Mr. S. infers, "plumped" in a haphazard manner, the quantity of eggs and larvæ were taken into careful consideration before they were given more. It will be noticed that in the ordinary way the bees never have an immense quantity of brood in any one stage, which will be the case in the Simmins method—leaving out of the question the extent of the brood-nest so early as March—which will force upon them a lot of one kind of work at a time. Can they do it? The best affirmative answers will be reports of March and April swarms, and in the negative by reports of chilled brood; the latter we shall scarcely expect, as persons are shy at reporting their failures. If the colony cares for the larvæ, what will be the result? The combs containing honey between the larvæ will be rapidly emptied, the queen finding abundance of empty cells in the centre of the brood-nest will add at a great rate to the already sufficiently numerous larval population, for if, as I said before, the brood-nest is not touched the queen can measure the nursing capability, and, if a good one, will lay up to it; but when you begin placing combs in its centre she becomes deceived.—LEONARD SMITH, *Elstow, Beds, April* 2.

COUNTY ASSOCIATIONS AND HONEY LABELS.

[1808.] I cannot let our respected Editor's able article of March 29 upon the subject of honey labels pass without a few remarks. I am thoroughly alive to the fact that there is no intention to reduce prices to a "dead level" regardless of quality, but such I fear will be the ultimate result; for when the public are educated to ask for Association labelled honey the retailer will be obliged to meet the producer in this way:—

"Mr. ——, I cannot give more than —— per lb. for your honey, because I can buy Association labelled honey at a lower price, and the public do not discern what you and I do—namely, that the quality is different; and, besides, So-and-So across the street is selling Association labelled honey at 2d. per jar less than I can sell it, and my customers say it is just the same."

The above may point out a little more clearly what I mean. This argument might no doubt be met by saying that only one agent will be appointed in each town or village, but what would become of all the other dealers who have a connection for English honey? They certainly will not stand by and see their trade taken from them.

No doubt quality should govern prices as between wholesale dealers and the retailers, but in reality the price that retailers can get for Association labelled honey will govern that of the wholesale dealer, and in his turn that of the producer; this would be done away with if everybody held out for a fair price, but there will always be found some who are "weak sellers," and are anxious to realise at the first obtainable price; result, a heavy fall in the market value of Association labelled honey. The mere affixing of county labels would not, I am sensible, cover all faults as to quality, but the thought will, of course

suggest itself to the actual consumer that one must be as good as another, or if not why are they labelled the same, hence parity of price! Moreover, if this became general, the labelling of satisfactory honey could not so easily be controlled as it evidently is in the small area named, and the fact that opinions differ so much as to quality would be an ever-present evil.

I am as anxious, I believe, as any of your readers to advance British bee-keeping, and my previous correspondence attacking the Association label was prompted not by any narrow-minded view of the subject, but simply because I felt that the means which were being advocated were wrong, and the result would be exactly opposite to that which was intended. I trust that the committee of our Association (the Lancashire and Cheshire), will take this matter up at an early date, so that some plan which may commend itself to the majority of the members may be adopted for this season.—RICHARD W. NICKSON, *Frodsham, Cheshire.*

QUEEN-REARING IN CANADA.

[1809.] I have received the enclosed letter from Mr. John McArthur, of Toronto, which I think may interest readers of the B.J. if you can find space for it. When in Canada last year I heard of Mr. McArthur's apiary at Toronto, and I called on him and saw both his home apiary and that in Toronto Island, where he is able to control the mating of the queens he rears. As I was pressed for time, Mr. McArthur promised to write me some particulars of the island and the observations he had been able to make, which he has now done.—JOHN M. HOOKER, *March* 30.

"Toronto, January 16, 1894.

"MR. J. M. HOOKER.

"DEAR SIR,—Before going into details on queen-rearing, permit me to give a description of our location. Toronto Island is a tract of land formed of sand washed up by the rivers Niagara, Dan, and Humber, and is situated in Lake Ontario, right in front of the city, and two miles from mainland. It embraces 5,000 acres; width $1\frac{3}{4}$ miles. Ten years ago it was a barren desert with little herbage of any kind. During the past fifteen years, however, Toronto has doubled its population, and a demand was made by the citizens for more park accommodation, and 300 acres was set apart for that purpose on the island. Thousands of honey-producing trees have been planted, clover grows luxuriantly, and the once sandy desert blossoms as the rose. I attempted the raising of queens here ten years ago, but owing to its barrenness I had to abandon the project. I then commenced to remedy the evil, and have been busy sowing seeds ever since, and have during the last four years managed to establish a small apiary on the island, my idea being to try and make queen-rearing one of the attractions of the place. I have succeeded in establishing the scarlet lobelia; it produces a beautiful honey. Sweet clover is getting a foothold, and by next year there will be sufficient to maintain quite a large apiary. It will then be one of the best on this continent for experimental purposes. It is somewhat exposed, and liable to be laid waste by hurricanes. Three of those storms or cyclones visited the island last season—in July, August, and October respectively. August and October were cyclones, that of August leaving me only five standing colonies out of forty-five, and doing considerable damage to houses and trees. With this exception the island is perfect for queen-rearing and other experiments that may require isolation.

"I commenced with Carniolans first because I found them a very gentle bee to handle, and my apiary was close to one of the busiest thoroughfares of the city. After breeding them for some time I saw one objection—the difficulty in finding the queens. They were so shy, and always seeking cover by hiding among the bees, it was almost impossible to find her. The bees, however, were quiet, good honey gatherers, and wintered well. A perfect bee, I thought, if they had the colour. So I selected the best queen in the yard and raised nine queens from her, and sent them to the island with hand-picked yellow drones from my best and gentlest colony of Ligurians. I only succeeded in mating one out of the nine. This cross produced workers about half and half. The eggs from this queen were given to a colony to raise queens from, and crossed again with the same drones. This was repeated four times in one season, the first cross showing the most marked change; any subsequent change being slow and gradual. Four straight crosses were made before much change was noticeable in the drones, but the bronze colouring gradually rose up and closed over the first segment next to the thorax."

(To be continued.)

METEOROLOGICAL SUMMARY.

March, 1894.

Locality: Stoke Prior, Worcestershire.
Height above sea level: 225 ft.
Rainfall, ·80 in.; heaviest fall, ·24 in. on 12th.
Rain fell on 10 days.
Max. shade temp., 64° on 26th and 30th. Min. temp. 23° on 15th.
Max. shade temp. at 9 a.m. 51° on 30th.
Min. temp. at 9 a.m., 28° on 17th.
Frosty nights, 10.
Max. barometer, 30° on 23rd. Min. barometer 28·7° on 13th.

On the whole an excellent month for bees. Above the average of sunshine. Very few strong winds, chiefly light winds from E.S.E

A few foggy mornings ; a falling barometer since 25th. Pear, plum, cherry, and gooseberry in blossom. Some newly gathered nectar deposited in hives during last three days. PERCY LEIGH.

WEATHER REPORT FOR MARCH, 1894.

WESTBOURNE, Sussex, 1894.

Rainfall, 1·65 in.
Heaviest fall, ·32 in. on 12th.
Rain fell on 14 days.
Below average, ·41 in.
Max. Temperature, 61° on 27th.
Min. Temperature, 27° on 18th.
Minimum on Grass, 19° on 5th
Frosty Nights, 8.
Sunshine, 219·1 hours.
Brightest Day, 27th, 11·65.
Sunless Days, 2.
Above average, 50·5.
Mn. Maximum, 51·6°.
Mn. Minimum, 36·5°.
Mean Temperature, 43·9°.
Maximum Barometer, 30·52° on 23rd.
Minimum Barometer, 29·20 on 13th.

L. B. BIRKETT.

Queries and Replies.

[988.] *Drone-Brood and Swarming.*—I find in one only of my hives a patch of drone-brood sealed over and apparently nearly hatching. Does this indicate a near approach to swarming? I ask this, because others of my stocks are more forward, and yet have no drone-brood in them. The brood is on the centre comb.

REPLY.—The drone-brood is no doubt owing to there being a patch of drone-cells in the centre comb, as stated.

[989.] *Detecting Robbing in Skeps—Destroying Queen Wasps.*—1. How is a beginner to detect robbing and best guard against it in straw skeps? 2. Also, how best to destroy queen wasps—by traps or otherwise? My record of victories in this direction is twenty-six already—by stalking!—W. H. M., *Glastonbury, March* 31.

REPLY.—1. Robbing is detected by observing strange bees flying about entrances and trying to enter the hive, and the efforts of the lawful inhabitants to repel the intruders. If the mischief is noticed in its early stage, and the bees of skep are fairly strong, reducing the size of the entrance, so as to allow passage for only about two bees at a time, will generally guard against it; but if it assumes the character of a general onslaught, and the defending bees are weak, it is very difficult to stop. It has been recommended to remove the hive indoors for a few days, setting an empty hive in its place to deceive the robbers into the idea that there is no more plunder to be had there. 2. Queen wasps cannot well be "trapped;" the only methods of destruction are searching them out among hive-wraps and such-like, and "stalking," as described.

[990.] *Black Robber Bees.*—The bees of one of my stocks seem to linger about the mouth of the hive, and occasionally three or four of them are to be seen fighting and hauling out of the hive a bee of smaller size and black-bodied. They seem strong, and, judging by the weight of the hive, they have sufficient provisions. I have been wondering whether they belonged to the hive, and that the bees wished to destroy them, or are they robbers? If you will enlighten me on the question and inform me what had I better do in the matter I should feel much obliged.—D. W. LEWIS, *Fishguard, March* 30.

REPLY.—There is no cause for alarm in what you have seen. The "black-bodied" bees are thieves, and the blackness is caused by their being robbed of their pubescence (or hairiness) through the rough usage they receive at the hands of the bees whose property they endeavour to carry off.

[991.] *Transferring from Skeps to Frame-Hives.—Moving Bees Short Distances.*—1. I have two stocks of bees in skeps, and one in a frame-hive. I want to get all into hives of the latter type this season by a way which I know very little of, viz.—by placing each skep over a frame-hive and allowing the bees to work down. Will you please give me particulars how to do this properly? 2. In a fortnight or so I shall have to move my bees about a hundred yards. I cannot move them in either of the ways advised in the "Guide Book." Could I move the bees some night to their future stands and keep them confined to their hives during the next day? Do you think if so confined they would return to their old stands?—J. E. WILKES, *Wolverhampton, March* 29.

REPLY.—1. Kindly refer to BEE JOURNAL for February 8 (page 58) for reply. 2. It is certain that more or less bees will be lost in moving the hives so short a distance at this season. Instead of confining them to the hives as proposed, the risk of loss will be lessened by fixing up some temporary arrangement for a few days which will alter the appearance of the hive entrance as much as possible, and so cause the bees to notice the change of location.

[992.] *Small v. Full-sized Queens.*—Would you kindly answer the few following queries?—1. Is a small queen generally as prolific as a large one, and is it a disadvantage for a queen to be small? 2. Are Ligurian queens smaller than black queens? 3. If I give full sheets of foundation in sections, am I likely to get as much comb-honey as if working for extracted honey? 4. I had a very weak stock a short time ago, which I united to another. I found that the queen had been laying, but the larvæ had died from cold, as there were not sufficient

bees to cover them. What is the best thing to do with these combs, as I do not want to risk the bees getting foul brood? 5. I have a stock which just covers all the frames in the hive, and a considerable quantity of blossom is out; should I put the super on now, or wait a short time until they become thicker?—G. J. BROWN, *Surrey, March* 1.

REPLY.—1. Small queens—other than dwarfs—are sometimes as prolific as large ones, but not "generally" so, hence it is that full-sized queens are preferred. 2. No. 3. No. It is calculated that about one-third more is got by the extracting plan. 4. Combs containing dead larvæ should be melted down. 5. Defer supering till the upper portion of the combs in brood-chamber show whitened edges, caused by the bees beginning to lengthen the cells out for storing purposes.

[993.] *A Beginner's Queries*—1. Is it necessary to raise the rack containing sections above the frames in any way, to allow the bees easy access, more the ordinary bee-ways between the sections; if so, in what way? 2. Is it necessary to cover the space left open by the rack, not covering all the frames which may be in the hive, so as to make the bees more readily work in the sections in the crate? 3. If a swarm of bees were purchased and put into a frame-hive, with foundation fixed in the frames, either in the first or second week in April, would they require feeding, and how soon would it be necessary to look at them to see how they are progressing?—BEGINNER, *Ilford, Essex.*

REPLY.—1. So long as the sections are raised ⅜ in. above the frame-tops, in the usual fashion—as they are in all properly-constructed racks—no other passage-way is required. 2. Every space or opening by which the warmth of the lower hive can escape (except into the sections) must be carefully covered up and the rack itself made as warm and cosy as possible to induce the bees to start working in the sections. 3. Yes. A swarm in April will require feeding for a few days; indeed, so long as natural food is not to be had outside. A glance might be given a couple of days after hiving to see if the sheets of foundation are safe in the frames, and that no break-down has occurred, after which there is no need for further inspection till supers are required.

[994.] *Using Combs not "Cleaned Up" by the Bees.*—Just after finishing extracting last year I was taken with a serious illness, which prevented me getting the combs cleaned up by the bees. What course should I follow? May I put the supers on again, and trust to the bees making them right before storing in them?—STRETTON, *Lincoln.*

REPLY.—If the combs have in them any appreciable quantity of granulated honey, they should be syringed with water and put through the extractor before being again used.

[995.] *Driven Bees Deserting Hives in March.—Early Swarming.*—On March 25 my bees—driven in September, 1893—issued from three hives, leaving them empty, and joined into one cluster. I put them into a fresh hive, but they came out again the next day, when I again hived them, giving a comb of brood from my strongest stock. This seems to have settled them down, and they are now quiet and contented. I have lately been feeding on syrup. My hives are all bar-frames. Could you kindly give me any reason for this strange proceeding? I ought to say there was no brood or eggs in any of the deserted hives, though some food remained. I moved all my bees about 50 yards last Christmas. A natural swarm also issued on March 26.—A. J. H., *Wishaw.*

REPLY.—We should say that some at least of the driven lots were queenless, and, without being able to explain the absence of brood or eggs from all three deserted hives, it is certain that that was the primary cause of the bees decamping. If there is no queen with the re-hived driven bees, queen-cells will probably be found on the brood-comb given by this time. Examine the hive from which the supposed natural swarm issued on the 26th ult., and see if you are not in error in supposing it to be a normal swarm.

Echoes from the Hives.

West Glamorgan.—The fine weather has not only awakened the bees, but the bee-keepers, too, to think of the spring "doing up" in the hives. My ten stocks have wintered well without serious loss or inconvenience. I gave them all a look in on Easter Monday and found a satisfactory state of progress in the brood-nests. The country is looking bare and but little forage is abroad for the bees, yet busy workers are bearing in pollen, and a merry hum and sweet odours indicate a healthy and happy condition, so gratifying to the ear, in the spring time more especially. A general scarcity of bees in skeps is prevalent here, no doubt consequent on the non-swarming of last year.—E. BUNNEY.

Beemount, Stoke Prior, Worcestershire, March 31.—What grand weather we have had this last week! Easter Monday and yesterday the thermometer registered 64 deg. in the shade—the maximum—and to-day it has been only 2 deg. less. Early this morning we had a very refreshing shower, of ·10 in. I observed countless bees upon the plum, cherry, pear, and gooseberry blossoms to-day, busily employed extracting the delicious nectar. This afternoon I spent a very enjoyable time amongst my bees. Happy to say I found brood in every hive, and in one, some newly stored honey. In this hive I added three frames fitted with Leake's thin brood foundation back of the

brood nest. I think it far better to place extra frames as I have done, than to insert them in middle of brood-chamber so early in the season. Saw eight queen wasps this week but am sorry to say I did not succeed in killing them.—PERCY LEIGH.

"*Honey Cott*," *Weston, Leamington, April* 2.—For the last week or two bees have had nice weather, and, consequently, have been very busy gathering pollen, with what honey they can get, from the few plum trees around us. We have had a little rain, temperature up to 65 deg., enabling the bees to take first chance at the opening of early fruit blossoms, such as gooseberries, &c. I have a quarter of an acre of sainfoin, just beginning to look nice and fresh, and if it turns out well I shall try and induce some of our farmers to go in for growing it as a regular crop. About a fortnight ago, when examining a double-queen stock, I removed the perforated dummy, and substituted one the propolised perforations of which had been opened up by re-burning the holes. I found that the queen had laid in three frames of one compartment, but on the other side there was no brood at all, so I feared that division was queenless; however, when replacing the frames, I saw the queen, and a night or two ago I had another look, and found that she has since started laying, and there is now brood on three frames. This shows it is not always well to conclude that a stock is queenless when we fail to see the queen, and there are no eggs or brood even in March. I know that the queen is only in her second year, and have no doubt the stock will be up to the mark by the time honey harvest arrives, if all goes on well. I am using a bottom feeder for stimulating this season, and on showing a friend last night how rapidly I could feed some stocks, he timed me, and I fed thirty-five stocks in exactly five minutes! A very different thing to feeding on the top with the bottle-feeder. After trying it well this season, I shall be able to give a more decided opinion of it. Look out for the queen wasps, they are on the move now. Have killed two already among the bees.—JOHN WALTON.

ADULTERATION OF HONEY.

In view of the discussion which has appeared in the American bee journals on the adulteration question as to the possibility or otherwise of detecting adulterated honey, the following article from the pen of the Editor of *Gleanings* will be read with instruction and interest by British bee-keepers. Mr. Root says:—

For several years back reports have been coming to us to the effect that James Heddon, of Dowagiac, Mich., was selling honey adulterated with glucose. Believing him to be a good straight man, and one of the veterans among honey-producers, we assured each one who wrote us that there must be some mistake, for we said it was not possible that Mr. Heddon could think of doing anything so unwise and foolish. At the Ohio State Convention in Cleveland, however, held on February 19 and 20, 1890, a sample tumbler of honey was shown us, after one of the sessions, said honey having been purchased of one of Mr. Heddon's customers. I had a talk with the man who brought the honey, and I told him that, from my acquaintance with such mixtures, I was satisfied in my own mind that the sample contained a large per cent. of glucose. The matter was talked of more or less between all the sessions by quite a number of the bee-keepers; and although we discussed it in a quiet way, a reporter for a large daily got hold of it, and had it written up in flaming style. As soon as Ernest got wind of it, he button-holed the reporter, and desired him to keep the whole out of print because he (Ernest) thought there must be some mistake, and there the matter dropped. Complaints still kept coming, however, and finally, by my direction, Ernest asked a well-known bee-keeper to purchase two cans of honey from Mr. Heddon and forward them on to us. This bee-keeper did so, and also sent an affidavit to the effect that the same honey was reshipped to us without taking from the depot, and this we have in our possession. The honey was received with Mr. Heddon's tag attached to the cans, and it seemed to be (judging from the taste) adulterated largely with glucose, and a poor quality at that. A sample was submitted to Prof. H. W. Wiley, chief chemist at Washington, D.C., through Prof. Cook, and here is his report:—

Prof. A. J. Cook, Agricultural College, Mich.

DEAR SIR,—The sample of honey sent by you on the 20th inst., numbered 100, has been entered as Serial No. 11,653; on analysis it gave the following numbers:—

	Per cent.
Direct polarisation at 23 deg.	56·3
Ditto, ditto, after inversion	48·7
Sucrose (calculated from above readings)	5·8
Reducing sugar, calculated as dextrose)	58·11
Ditto, ditto, invertose	59·95
Water	21·30
Ash	00·28

The sample is undoubtedly adulterated with at least 50 per cent. of glucose, although, as you know, it is not possible to determine the exact amount on account of the difference in rotation of the various glucoses.

Trusting that this analysis will be satisfactory, I am, respectfully,

H. W. WILEY, Chemist.

(11,653—E. E. E.—J. S. C.)

Washington, D.C., April 1, 1893.

A sample was also submitted to Prof. Cook, and was by him also pronounced adulterated with glucose.

You may ask why we did not write to Mr

Heddon in regard to this thing. We did so, but received anything but a satisfactory answer.

I believe we practise and preach that kind of charity that "is kind, and suffereth long;" and that is the reason why we did not publish the analysis before; but the affidavit below, of a more recent case, it seems to me, demands that the bee-keepers of our land be notified of these things.

The State of Ohio, Cuyahoga Co., ss.

Personally appeared before me, John C. Hemmeter, a Notary Public for and within said County, Geo. G. Willard, who being by me first duly sworn upon his said oath, says:

That he is conducting a general merchandise business at No. 270, Pearl-street, in the city of Cleveland, County and State aforesaid.

That on or about November 15 last, affiant received a shipment of honey from James Heddon, doing business at Dowagiac, in the State of Michigan; that said honey so shipped and received by the affiant hereof was represented to be a pure and unadulterated article; in accordance with said statement of representation of its purity, did authorise the selling of the same to the trade by his agents. That on or about December 7, following, one of the affiant's agents was arrested by the State authorities for offering and selling an adulterated and impure honey, and subpœned to appear for trial before a legal tribunal, having jurisdiction in the premises; affiant, in conjunction with said agent, appeared in said court on the day set for trial, heard the hearing of said agent, and all the witnesses in connection with the case, including that of the State's chemist.

That the Judge, after summing up the evidence, rendered a verdict as charged, and fining said agent 25 dols. and the costs of prosecution (aggregating the sum of 64 dols. 85 c.), which amount the affiant hereof paid.

Whereupon affiant procured another sample out of same shipment, and delivered same to Professor Hobbs (being the Professor of Chemistry at the Cleveland College) for further analysation, who, upon performance of the same, coincided with the State chemist, in pronouncing it "adulterated and impure." Further, affiant saith not.

GEO. G. WILLARD.

Sworn to before me, and by the said George G. Willard, subscribed in my presence February 9, A. D. 1894.

JOHN C. HEMMETER, Notary Public.

Mr. Willard says he wrote to Mr. Heddon, asking him to secure him by giving him an affidavit that the honey was pure, to which Mr. Heddon made no reply; at least he (Willard) received none. He also says he (Mr. Heddon) finally took back the honey and returned the money. The "cheap honey" that Mr. Heddon has been advertising for a number of years, together with his recent utterances on the glucose question, and which we have criticised, seem to give colouring to the statements of the four different chemists.

We have other evidence, not depending upon analysis, but think best to withhold it for the present.—*Gleanings.*

Bee Shows to Come.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries close May 31. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries close May 1. Post entries at double fees till May 12. Secretary, John Huckle, B.B.K.A., King's Langley.

TRADE CATALOGUES RECEIVED.

A. W. Harrison, Potters Bar, Middlesex.—This catalogue has been considerably extended for the present season, many items being included not usually found in lists of bee goods. We also notice a "Scientific and Literary" page, embracing optical and microscopical appliances. Mr. Harrison also publishes the conditions under which he is prepared to purchase the surplus honey of his customers upon equitable terms.

W. Rushton, 17, *Stanley-street, Bedford.*—This is a short but concise list of all the most needful requirements of a modern apiary.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column. Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

PLAIN ENGLISH.—If our correspondent refers to the instructions at head of "Correspondence" column, he will find that "no notice is taken of anonymous communications."

ANXIOUS (Tunbridge Wells).—*Fermented Syrup for Bee-food.*—The sample of honey melted along with the wax" will do quite well for bee-food, but the fermented syrup must be boiled for a few minutes—after adding a little water to it—before being given to the bees.

X. Y. Z. (Ipswich).—Thanks for sending cutting, but the fable it deals with is of so ancient a date as to make us marvel that a newspaper should devote leaded-out type to such rubbish.

Editorial, Notices, &c.

SPRING EXAMINATION OF HIVES.

As a result, apparently, of some observations we made in this month's issue of our monthly, the *Record*, several correspondents have written in terms which fully confirm the necessity for the few words of caution conveyed in the article referred to. Instances are reported wherein queens have been "balled" during the last four or five weeks, and there can be little doubt that had the hives been left untouched many now queenless colonies would have been prospering stocks to-day. One correspondent, whose letter appears on p. 147, has been particularly unfortunate, and now bewails the loss of queens clearly alive before any disturbance of the respective hives took place, and as clearly "balled," or otherwise destroyed, immediately after the said disturbance.

We by no means desire it to be taken as our view that no spring manipulation at all should take place, but would merely impress on those who—unaware of the risks involved—take no extra care at all when making these early inspections of their hives. It is not enough to say that experienced bee-keepers seldom or never have these mishaps, because the probability is that the latter are intuitively careful when obliged to examine their colonies in the early spring, and operate in an entirely different style to that necessary later in the season. What old hands have long known, viz., that gentleness and care is needed at this time, the reports which have reached us during the last few days further and fully confirm.

Another point likely to strike the close observer as showing where the trouble arises is the fact that in the majority of instances where queens have been lost the mischief has occurred in double-queened hives. Now we know that if the young bee-keeper has a special anxiety about his bees at all—and who has not in such a spring as this?—it is sure to have reference to his "Wells." He *does* want to know how *it*, above all others, is getting on, and, in consequence, begins quarrying into brood-chambers, with the unfortunate result sometimes of finding his dual-queened stock perforce turned into a single one. There is just one comfort about the business, and that is the ease with which the bees of the two compartments of the "Wells" hive may be joined up to make a strong colony, so that the only loss is that of the additional brood which would have been raised had the second queen been preserved. But the lesson to be learnt is an obvious one, and, with the object of forcing it home to readers, we willingly comply with the request of a correspondent to reprint a portion of the article—the publication of which has given rise to the correspondence to which we have referred—and which reads as follows:—

"BALLED" QUEENS.—The month of March, at no time wintry in character—seeing that bees have been flying almost daily—closes with an Easter-tide as charming as could be desired, and the summer-like holiday time will, no doubt, have been taken advantage of by bee-keepers in making an inspection of their hives and the contents thereof. For this it would ill become us to blame them; indeed, it is an essential part of our teaching that no stock of bees should be allowed to suffer from neglect at this season, and wherever the need for a thorough examination really exists, it should be gone through. But, while an inspection of some kind may be considered indispensable in good bee-management, judicious spring examinations are often exceeded or supplemented by such a pulling about of the frames of brood-nests as are always injurious, and not seldom fatal, to the future of the colony.

It would surprise many who consider themselves fairly well up in bee-matters to know how many queens are "balled" and killed, entirely through roughly-managed and too early spring manipulations; there being no doubt in our mind that it is in a time of summer warmth such as we are now enjoying that the mishaps referred to most frequently occur. Though March is still with us as we write pollen is being gathered in abundance; breeding is getting into full swing, and everything tends to create in the bees what seems to be extreme anxiety for the queen's welfare; but, being subject to modern methods, they

show their affection for the "mother bee" in very extraordinary fashion sometimes when interfered with in the way we have stated.

Why this is so we need not stop to enquire, it is enough to know that it does happen, and that a very large percentage of the fatalities to queens every spring may be safely attributed to the habit we have ventured to deprecate. So that, whenever a dead queen is cast out of a hive subsequent to an examination of the frames, or "a ball of bees somewhat larger than a walnut"—as a correspondent puts it—is seen on the combs or on the floor-board while a hive is being examined, the operator may be sure that the "ball" will contain the unfortunate queen in process of being "hugged" to death by her own subjects.

To prevent this mishap it is only needful to exercise extra care just at this time—especially when making a first examination—and the avoidance of any more handling of frames than is absolutely necessary. If brood and food are seen to be plentiful the frames should not be lifted out at all, nor even drawn apart more than can be helped, the hive being closed up at once and all coverings carefully readjusted. No "balling" of queens will follow an examination which goes no further than this, and in course of a fortnight or three weeks the matricidal tendency on the part of the bees will probably have passed away. If, however, a complete overhaul of the combs is found to be really required, all lifting out and replacing should be done as gently as possible: using no excess of smoke, and avoiding anything like jarring or jolting about the hive, such as tends to excite or alarm the bees. There are good reasons for believing that a comparatively trifling slip in handling the frames will sometimes cause "balling" in spring, and the fact of its often occurring at so early a date that there is no chance of a young queen being raised renders the mischief doubly annoying.

BRITISH BEE-KEEPERS' ASSOCIATION.

Important Notice.—The annual examination of candidates desirous of competing for first and second-class certificates will be held in London on Thursday, May 10. Intending candidates must give notice to the secretary, John Huckle, King's Langley, not later than Saturday, April 21.

LINCOLNSHIRE BEE-KEEPERS' ASSOCIATION.

The quarterly committee meeting of the above association was held on Friday, April 6, in the secretary's office of the Lincolnshire Agricultural Society, Lincoln, Lord St. Vincent in the chair. Present—Gerard J. Young, Esq., J.P., Claxby; Dr. Carline and Messrs. Emmerson and Marshall, Lincoln; Dr. P. Sharp, Brant-Broughton; Mr. Allen, Metheringham; Mr. F. J. Cribb, Gainsboro', expert; and Mr. R. Godson, Alford, secretary.

After the minutes of the previous meeting had been read and signed by the chairman, it was decided that the affiliation fee to the British Bee-keepers' Association be increased by £1. 1s., in order that the medals of the B.B.K.A may be presented at the show of the Lincolnshire Agricultural Society, to be held this year at Grimsby. The question of the designs for the medals of the association, to be given for the first time this year at the same show, was referred to a sub-committee, consisting of Lord St. Vincent, Mr. F. J. Cribb, and Mr. Godson. The usual votes of supply for the subscriptions to the different shows were then proceeded with, and the secretary authorised to arrange with Mr. H. O. Smith, of Louth, for several Bee-Chats during the summer months at various centres. It was also decided to purchase two copies each of the "British Bee-keepers' Guide-book" and "Simmin's Bee-farm," for the use of members, and to accept Mr. Blow's offer of prizes to be given at the Blankney show. After passing some accounts and electing Mr. Fisher (Lincoln) a member of the committee, the usual vote of thanks to the chairman closed a very successful meeting.

IRISH BEE-KEEPERS' ASSOCIATION.

A conversational meeting of the above Association was held on Wednesday, the 4th inst., by kind permission of Dr. Traill, at his rooms, Trinity College, Dublin, Dr. Traill presiding. There was a fair attendance of members and their friends.

Mr. Turlough O'Bryen read a paper on the "Sale of Honey." He stated that the large increase in the production of honey raised the question whether prices would fall so low as to make bee-keeping unprofitable. He thought there was danger of this if all were to send their honey to the same market, but not if bee-keepers would do what they could to provide a market at home. The amount paid for bad imported honey showed that there is little fear of Ireland really producing too much honey if the sale is sufficiently dispersed. When he was bee-keeping in Clare he used to

bottle and label run honey, and send it to small village shops and to his grocer. At first there was an objection to take it, though the conditions were "sell or return," as there was an idea that, like pitch, it was not easy to handle; but when they saw how clean and attractive-looking the bottles were, they were willing to place them in their windows. Sections, too, they took, when samples of six were put into neat cases with glass fronts, the rest being packed in a box. After the first year he found no difficulty in selling in this way from 2 cwt. to 3 cwt. of run honey and as many hundred sections. He advocated moderate prices; for, even at such prices, a quick and ready sale, without the expense and risk of a long journey, would make honey give a larger profit than perhaps any other produce of the farm, and the effect of supplying it at moderate prices, would be, it may be hoped, that before long on every breakfast-table, whether in cottage or in manor, the honey-pot would be as sure of a place as the tea-pot. While anxious, however, to encourage local markets as much as possible, he did not the less appreciate the great advantages that members of the Association derive from having a central depôt.

Mr. Hargraft mentioned that he had been successful in selling honey at Parsonstown.

Later on in the evening Mr. Read described an experiment he had made in wintering hives on the "cellaring" principle. He had placed them in an outhouse enclosed in large outer cases, completely surrounding them with chaff, and covering them with it to the height of about 6 in., a layer of chaff, about 2 in. deep, being also placed under them. A wisp of straw went up through the chaff, so that the air could percolate slowly through it, and air-space was given below the frames by means of a lift. He had found this method very satisfactory in the case of weak stocks. The results had varied in the case of strong stocks, the least satisfactory case being where two stocks previously strangers to each other had been placed in the same hive, divided by a perforated dummy, the excessive mortality being probably due to their keeping one another in a state of excitement.

Various other subjects of interest were discussed, and Mr. Thos. Lynch gave an encouraging instance of profitable bee-keeping, by stating that last year he made an average profit of £2. 10s. per hive from ten hives.

HIVE ENTRANCES.

INTERNAL CONDITION JUDGED FROM OUTSIDE.

Placing hives near together saves travel and land where space is limited; but, when everything is considered, it is advisable to space them about seven feet apart, and face the entrances in one direction, which is toward the honey-house or workshop, that all the entrances may be seen at the same time.

Thus arranged it forms what may be termed a face or countenance for the apiary, and is of equal importance to having the scholars in a schoolroom facing the master. If a queen is lost, the store of food is gone, or a colony is preparing to swarm, there is usually an indication of it in the manœuvres of the bees at the entrance. Much can be learned as to the state of the colonies by walking along and glancing at the rows of entrances in the evening. If some colonies roar louder than others it will be found that it is because they either are stronger in bees or are gathering more honey; and it is not always necessary to take the combs out of the hives, but it may usually be determined by the dropping of loaded bees at the entrance, or the appearance of bits of new wax on the combs, on simply removing the covers.

When it is dark, and all the bees have retired within the hives, and a colony is heard to mutter in a restless fashion, it should be made a subject for examination the next day.

Again, in the early morning it may be noticed that some colonies are exceptionally lively at the entrances, and have brought out dirt, pieces of comb, and dead bees. This may indicate that the brood-space or space for new honey is being enlarged. Strength of colonies, or the evaporation of honey, is also denoted by the amount of moisture which condenses on the alighting-board—the breath of the colony, so to call it.

A few bees at the entrance in a disturbed mood, when all the rest are still, may be caused by the loss of their queen, which may be carried out and dropped near by, and be easily discovered in the morning; and later in the day, when the bees come to fly, a little bunch of "mourners" will collect around the dead queen, and more bees than usual stand idly about the front of the hive.

As the apiarist reviews the colonies some morning, he might be heard to remark in surprise, "Well, those bees in this hive are hustlers," noting an entrance where the bees are passing out and returning much more lively than at others. Examination of the combs shows that they are getting honey or pollen, continuing right on, even in the rain—utilising every minute of sunshine, while many other colonies are doing nothing, and are slow to put on business airs when the sun shines and honey has become quite plentiful in the flowers.

In the season of 1891, while mowing before the hives early in the morning, one hive was noticed where the bees seemed to be *always* out. Continuing to rise earlier and earlier, these bees were found dropping down upon the alighting-board with heavy loads, while it was yet quite dark—so dark that the incoming workers could not be seen until they had alighted at the entrance. They held out thus industrious all through the fall; and where no other colony laid up above two or three pounds of fall honey, this colony stored

between thirty and forty. When one-half or less of the entrances in the apiary are visible we do not record these exceptional colonies, because of the liability of the other half containing several even more industrious ones.

By observing the progress of the colonies all the time, from early spring up to the honey-harvest, the surplus-receptacles may be placed on the right colonies at the right time instead of watching the progress in the receptacles and making numerous changes and surprising mistakes after the harvest begins. The peculiar traits of the different colonies from which to rear queens will also be known. [Mr. Dayton makes an excellent point here; viz., entrance diagnosis from day to day will determine better than any other means what colonies will be likely to require supers before others.—Ed. *Gleanings.*]

In no country is this study of the bees more neglected than here in California. If the bees are not managed entirely by hired help, the owner seldom spends more than four or six weeks in the apiary during the harvesting of the annual crop—a season of fatiguing labor, stings, and perspiration. The apiarists, or bee-owners, are mostly nurserymen, fruit-growers, shoe, harness, and dry-goods merchants, grocers, hotel-keepers, tradesmen, dairymen, stock-buyers, small capitalists, &c. The bees, fixtures, and land occupied is called a "bee-ranch." The prominent distinction between a ranch and a farm is that a ranch is a place where labouring people and animals stay, while a farm includes a home. An apiary *may* be a place where bees are *kept* for love, study, and improvement. A ranch is a place where bees *stay* so long as they are a profitable speculation. If they are black bees it is all the same—stings belong to the hired help, and starving colonies to dry years, not always.

The bee-keeper who spends no more than six weeks in a year with the bees cannot learn enough about them to create a desire for the improvement of stock or fixtures, any more than the boy can get an education by attending school but six weeks in the year.

In my last article I said considerable about chaparral, thinking chaparral and greasewood to be one and the same plant, as I had several times been told. I have since learned that they are somewhat different. Wherever I used chaparral it should be changed to greasewood. Chaparral grows there, but not so much as greasewood (or chemice).

[The main reason why we have the entrances face different directions at our apiary is that the bees may be better able to mark their entrances. The similarity of the grape-vines, the absence of other foliage or stumps, and other distinguishing objects, render this necessary; but in many localities a stump here, a shrub here, a mound there, trees of various sizes throughout the apiary, serve to mark each locality, and hence there would be a big advantage in having the entrances all one way. We have diagnosed colonies at the entrances in much the same way as Mr. Dayton speaks of; and was and is quite a hobby of ours.—Ed. *Gleanings.*]

C. W. Dayton, *in* "*Gleanings.*"

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The Editors of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "The Manager, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of Advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1810.] The grand bee weather of the past fortnight has given a decided impetus to our craft, and, to use a nautical phrase, we are fairly under weigh. The high temperature, combined with brilliant sunshine, has developed abundant forage for the bees. Fruit trees are snowy white with bloom, the wild cherries, of which we have a few in the neighbouring woods, are laden with blossoms, while the fields of grass and meadows are studded with the golden yellow of the dandelion; copse and dell are white with the mint flower, the wild anemone. Then, in the near future, sycamores and hollies promise a wealth of bloom, and the fields of trifolium and vetches will increase the breadth of our bee forage by leaps and bounds; the dark green of the fields of sainfoin also betoken an Eldorado of blossom and honey later on. We are hoping for an early rain, which would increase the chance of a gleaning from the white clover, of which, I am sorry to say, we have a sparse plant in the grass ley, owing to the prolonged drought last year.

The present settled weather should give an opportunity of overhauling the hives and clearing out the accumulations of winter. Where the apiary is in a healthy condition, a very expeditious plan is to start with a clean empty hive. Lift the first hive containing a colony from the spot on which it stands, and place the empty hive in its place, then transfer your colony of bees into the clean hive, and during the few minutes you are doing the job take note of the condition of the colony, and act accordingly. The dirty hive can be thoroughly cleaned out, and colony No. 2 transferred into the hive that erstwhile contained colony No. 1, and so on, to the end of the job. This method gives a view of the

whole brood-nest, takes but a short time to complete, and gives the bee-keeper an opportunity of knowing the exact state of every colony in the apiary.

I should advise bee-keepers to place their orders for bee appliances promptly, as there seems every prospect of an early summer, and manufacturers will be rushed with an influx of orders all wanted at once, so soon as the news spreads of a few early swarms in each vicinity. I called on Mr. Flood, of Reading, last week, and he showed me some supers of shallow frames fitted with the wide metal ends, and in discussing the points, I certainly think that we shall require a wider frame also. Time, of course, will tell; but it appears to me that with very thick honey the combs will receive much damage on the side that is extracted first (perhaps Mr. Lamb may enlighten us on this point), my contention was that a wider frame would protect the comb from injury when extracting, and also strengthen the comb by allowing more attachment to the greater surface of the wood. The spacing of brood frames will be an interesting subject to discuss. I have always used the "Abbott" wide-shouldered frames, and bought a gross of this pattern of Mr. Walton, of Newark, a few years back; these frames were made similar to the Abbott frame, the end pieces being glued on instead of cut all in one piece, as in the original, and instead of being 1½ in. were only 1⅜ in. wide, so that, of course, was the distance from centre to centre. Now, the combs built in these frames are the most perfectly interchangeable of any in my apiary. The combs are as flat as a board, but with the 1½ in. spacing the stores project somewhat in most combs, and render frames unsuitable for transfer except they are pared down to fit, and this makes a messing job sometimes. The only objection I had to the 1⅜ in. frames was the fact that I had got so many of the ends loose from the glue perishing. If Messrs. Abbott would take the hint, their frames will be perfect as regards the interchangeability of combs, and if the top bar is increased in width to 1 1/16 in. wide, the 1/16 in. space between top bars would prevent brace combs, or an increase of width of top bar to 1 in. would, with the diminished width of shoulder to 1⅜, reduce the present space of ⅝ to ¾. This, I contend, would effect a great improvement, both as regards the uniform thickness of the combs and also the quantity of brace combs built between the tops of combs brood.—W. Woodley, *Beedon, Newbury.*

EARLY HONEY.

[1811.] It has been my lot for two seasons past to report a copious honey-flow from the willows, and again this spring I have to "echo" the same pleasant tale. This time it comes to a greater extent than ever. Most hives seem to be blocked full with new honey, much of it already sealed. One hive that had not been touched since August last, when the surplus honey was removed, was left in a very slovenly state pending a convenient opportunity to pack it up for winter; but that convenient opportunity did not arrive until two days ago, when, upon tearing off the doubled-up quilting, &c., I found, instead of nice clean frame-tops, a lot of beautifully white, awfully ugly comb honey. Wherever there was an open space in the carelessly-thrown-on packing, it was built up full and stored with new honey. Every frame (eleven) was blocked full with either honey or brood, and of course the hive crammed with bees, despite the fact that the poor things had had no winter passages cut, or even a bit of soft candy. I never remember the bees looking so forward and promising at this season of the year before. I am quite convinced that my best way to get forward stocks in spring is to allow the bees to settle down in August on an abundance of their own gathered stores, arranged in the combs just according to their own ideas; pack a good covering of sound quilting on the frames at that date, and not remove it until March or April following. My opinion is that, treated so, the queen ceases laying very early in autumn, and both queen and workers are resting from that time until almost late in spring—at any rate, until genial weather arouses them to activity, when they will go right ahead without a check as a rule; and and stocks that have been stimulated and pulled to pieces late in autumn, and then again early in spring, and terrified the winter long with soft-candy messengers, will be found coming along behind—if, indeed, they are coming at all.

A plentiful supply of honey in the willows, and warm sunshine, or, failing that, well-stored hives, is the best spring stimulation.—Hy. Neve, *Heathfield, Sussex, April* 6.

BEE PROSPECTS IN YORKSHIRE.

[1812.] Bees in this neighbourhood are very forward, several swarms being already announced, and all stocks are doing well. I wonder who can tell us the value of a swarm in March? Supposing that "a swarm in May is worth a load of hay," a swarm in March ought to be worth a whole stack. April swarms will be quite common this year, *i.e.*, weather permitting. We have abundance of food, which the proverbial April showers are bringing forth. So far everything augurs well for another splendid summer. By the way, wasps in this district had a fine time of it last season, going in and out of hives as though they belonged to them, and no doubt helping to distribute foul brood not a little. It seems to me there is more fear from this source than from the bees themselves. Bee-keepers in this district lost a large number of hives after sending to the moors, and in most instances seemed to blame the wasp for both eating

honey and brood. I know they are general scavengers, having watched them decapitate a drone bee in about half a minute and start chewing away at something which they found in the head; but I never gave them credit for going in for eating the brood! My bees did very well at the heather. Several of my best hives brought me back over 100 lb. of honey each, although there was barely a week's honey flow, the dry weather making a very short harvest.—S. CHADWICK, *Malton, Yorks., April 7.*

TROUBLE WITH "WELLS" DIVIDERS

[1813.] In reference to the letter of your correspondent, "An Enthusiast," in B. J. of March 29 (1801, p. 125), who complains of trouble with a perforated divider supplied by me, I think the hive must be in fault, and not the divider, as they are all made to fit hives taking the standard frame, unless any special size has been ordered. If your correspondent required a special size divider, and omitted to mention the fact. However, as the divider appears to be a little too long to fit his hive, I may explain that he need not file the tin in order to shorten it; a little gentle pressure will cause the tin to slip off the end quite easily; the wood can then be reduced to any length required, and the tin replaced as before. If the divider is too deep, both ends must be removed, and the tin binding shortened, and the wood in like manner. If "Enthusiast" does not care to go to that trouble, I would be very pleased to make him one to fit his hive if he will send me the *exact* measurement required.—G. WELLS, *Aylesford, Kent, April 9.*

A QUEEN (?) MONSTROSITY.

[1814.] Enclosed you will find the "queen bee" I wrote about, and which you desired to see (1797, p. 123 of your issue for March 29). I got permission to take it from the Association's collection so that I might let you have a look at it. Kindly let me have it back as soon as possible after inspection.—N. & N. E. R.

[The "queen (?) monstrosity" is neither more nor less than a death's-head moth.—EDS.]

MEAD MAKING.

[1815.] I beg to ask if you will call the attention of friend R. Chapman to his letter (1764, p. 75) in B. J. of February 22, and the request in your footnote? I should be pleased to have his recipe for mead making, and have no doubt that many others would share my pleasure in seeing his method in print in your pages.—A. J., *Yeo, near Cardiff.*

[We will draw Mr. Chapman's attention to your request, and no doubt he will favour us with the recipe.—EDS.]

EARLY SWARMING.

[1816.] We were rather surprised to learn from a paragraph in the local papers that an old bee-keeper and a neighbour had successfully hived two swarms of bees on Easter Sunday. Naturally, all sorts of remarks were passed, and sundry doubts expressed as to the genuineness of the report, with comments both as to cause and effect if true. But as no one was in a position to give any definite information we were obliged to wait for further news. Fortunately, the solution of the problem was soon put an end to by the appearance of the lucky individual himself, who, on interrogation, said it was quite true all the papers had stated. The first swarm came out of a strong hive just about noon, and was followed by a second from another hive about an hour afterwards. He had put the first into a skep hive, which had both comb and honey in it. The second was hived in a skep without any comb, and this he had fed since with sugar; both the swarms are going on all right. The old hives were working hard carrying in pollen on every day. He said that he once before had had a swarm in April, but had never heard of one in March before. On being asked how long he had been a bee-keeper, he said as long as he could remember; his father had kept bees when he was a boy. His father was the general factotum for the famous Sidney Smith when he lived at Foston, near Barton Hill. James Robinson, the owner of the bees, has lived nearly all his life at Coneysthorpe, in connection with the Castle Howard estate. When he was told about the advantages to be derived from working bees in bar-frame hives, and asked why he had not tried them, a quiet smile came over his face as he said that he had done very well with skeps up to now.—S. CHADWICK, *Malton.*

QUEEN-REARING IN CANADA.

(Concluded from page 136.)

[1817.] At the eighth cross yellow blotches could be seen making their appearance all over the abdomen. At this cross the workers were evenly marked—three banded. It has taken eight more crosses to secure the fourth and fifth band, the seventeenth cross producing every bee five banded. The drones are not yet so bright as I would like. Drones from the same queen have been used in breeding for four years. I have not been able to give a reason why a queen producing uniform stock as regards colour should not produce queens evenly marked also, but they don't. In thus breeding I have been able to establish the gentle character of the Carniolan, which is now larger than the original, and have a yellow bee with five bands and all the good qualities I have already enumerated; easily handled without smoke or veil at any hour of the day, whether honey is plentiful or not; queens and drones being perfectly yellow in colour. We are being rather misled on this side on this queen

business; no doubt they can be raised in great numbers, but this will cease, because there is not proper care given to the rearing nor mating. There is too much mechanical work about the business. We have only to look at the queens, they are shrivelled bits of things, and not the long, deep-bodied queens we find produced under natural conditions. These latter are the sort I want to produce.

Queens cannot be raised so cheap on the island as on the mainland. The loss so far in mating has been heavy, owing, I believe, to our having so much water about.

This season I had the pleasure of seeing several queens mated, and it was interesting to watch the conflict between the drones at this time. They fight most desperately, proving that they are not the quiet, timid creatures we think them. In fact, the "lazy drone" has the faculty of combativeness largely developed when occasion requires it. They assemble in a little swarm, so to speak, and surround the queen; sometimes they come to close quarters, and can be seen striking and catching at each other, when two or three will get hold of one another, and can be seen tumbling nearly to the ground, only to rise again and renew the fight. I once saw a newly-mated queen drop within 100 ft. of the hives. There is a little lagoon in front of my bee-yard, shallow water with many rushes growing in it; seeing her drop in the water, I waded in, and found her clinging to a rush. I gave her ten minutes to straighten up and locate her hive. I was afraid to leave her lest she should again drop in the water, so I cut the rush and took her to a stock that had lost their queen in mating the day previous. I let her run in, and she was accepted without any trouble, and proved an A1 queen.

It is most interesting to watch the queens during their mating excursions; very remarkable, too, is the difference in the time occupied in mating; some are mated on their first trip; others will fly out every bright day for many days and still escape fertilisation, eventually becoming drone-breeders. Others, again, when long in mating, will be "balled" by the bees; and at times escape from their murderous embrace; then make another trip; get mated, and in returning actually get "balled" again. This latter is, however, a rare occurrence, it being very unusual for a colony to reject a newly-mated queen. As a rule, the home-coming of the latter is made the occasion of great rejoicing, in remarkable contrast to the state of the colony when a queen gets lost in mating; in which case nothing restores the bees' tranquillity but giving them either a queen-cell or a comb containing eggs and larvæ. Some queens also are very slow at leaving the hive on their mating trip, remaining cold and indifferent for over thirty days, then get mated and do well. Experience leads me to say that the largest, and to all appearance the strongest, queens are, as a rule, the most difficult to get mated.

It is desirable that close breeding should be resorted to in order to make the desired characteristics indelible. Had not this been done in the case of our domestic animals, the effects of a cross on any inferior stock would have been scarcely recognisable. I say, then, in-and-in breeding among bees is very necessary, because after all it is only natural selection, and no injury can result from this source. Another peculiarity I observed was in the motion of the drone flight when circling around the bee-yard. His movements resembled those of the workers when on long excursions; they fly backward with a circular or wobbling motion with their head to the wind, keeping an eye, as it were, on the bee-yard.

This is certainly a grand spot to make observations of this kind, there being nothing to mar the vision. Any movements can be seen at a long range with good eyes, and this watching occupation is very much enjoyed by myself, as is everything tending to throw any light on queen-breeding.

The queen I have been breeding from this past season is a fine yellow one, producing perfectly yellow drones. The bees are evenly marked, only four banded, and great honey gatherers. Last year I secured 200 lb. from the hive before the stock was sent to the island. It was sent about the middle of July, and gathered an additional 100 lb. there, besides giving me an additional strong colony by dividing, and four nucleus stocks that winter safely. It has also supplied all the larva for queens, and raised from 15,000 to 20,000 drones. Not a bad record.

So far as the latest system of queen-rearing goes, I love genius, but I do think there are too many mechanical operations about this latest plan of queen-rearing. Like the auld wife, I think "the auld ways are best," and from them will come the best results. I also tested the power of drones, the offspring of fertile workers, and found them perfectly capable of mating queens, but cannot say much about the stock till next season. If raised in drone cells I believe these drones are just as good as those from a fertile queen.

I would like to have said something about queen-introducing, as there is something in this that baffles all my ingenuity, but this letter is already too long, so I must defer adding anything till a future day.—JOHN MCARTHUR, *Toronto, Canada.*

Queries and Replies.

[996.] *Loss of Queens in Spring.*—Can you explain and advise me concerning the following:—Last autumn I put two stocks, both rather weak but with good young queens, into a "Wells" hive, where they had everything they could wish for, including a mahogany dummy ½ in. thick and pierced with 480

holes of the proper size. Both stocks wintered well, and both queens began to lay early. On March 8 I gave all my bees some flour-candy to stimulate them. I was so well satisfied with the look of the bees in the "Wells" hive that I did not make an examination until March 26. Then I looked into the one side only and found lots of sealed brood and everything going on well. I did not look into the other compartment because the bees in it seemed just as strong and brisk. No bees could or did get past the Wells-dummy, which was fixed in guides on the sides of the hive to prevent the possibility of warping. The wood had not shrunk and the quilt had not been moved or creased or puckered at the top. On March 28 our Association expert came round and we examined the untouched half of the hive and found no queen, no eggs, all the brood hatched out—some newly-hatched bees being seen—and plenty of stores. The holes in the Wells dummy were all propolised up.

1. What had become of the queen? The entrances are close together as in other "Wells" hives I see advertised for sale. There was plenty of sealed brood next to the Wells dummy in the other stock. I removed the Wells dummy, replacing it with an ordinary one, and opened about 100 holes and put it in again. Two days later, when I thought the bees would have acquired the same scent, united the two lots and put them on one side of the hive.

The loss of the queen has not been my only misfortune, however, for as I had determined to try the Wells system I began to move the next hive—a ten-frame single one—towards the Wells hive, in order to put the stock of bees into the empty half of the Wells hive. But, observing that the bees were not working as they ought to have been doing, and were not bringing in much pollen, I yesterday (April 2) examined this stock, which I had not touched before, except to place a cake of candy over the feed-hole. Neither queen nor eggs, plenty of stores, a little sealed brood, and one or two unsealed larvæ, showing that the queen was there until about a week before—that is, before I had begun to move the hive, and long after I had put the candy in. There is one queen cell sealed over—a very small one—on one of the combs, but I could see no drone cells. 2. What shall I do? Is it any good leaving the bees to themselves on the chance of the queen hatching out and getting fertilised by chance drones from other places? There are certainly no drones in my apiary yet, and are not likely to be for three weeks, I should say. I think of uniting these queenless bees with those in the "Wells" hive, and so getting a strong single lot of bees and working them on the single plan, and then I should remove that queen cell. 3. Would this be the best thing to do? My candy was made of cane sugar and lentil flour according to the recipe in the B.B.K. guide-book, and the bees like it. My other five lots are doing well and increasing fast. 4. What has become of my No. 5 single hive queen? There has been very little robbing, and that only by single bees. 5. Do single robbers kill the queen? — AUBREY EDWARDS, *Orleton, April* 3.

REPLY.—1. Excepting for your tell-tale dates we should have judged the loss of queen in the "Wells" hive to be one of the misfortunes to which all colonies of bees are more or less liable. But when we read of "newly-hatched bees being seen" just twenty days after "stimulating" was began on the 8th ult., it becomes apparent that the mishap to the queen occurred on that date, and that no eggs were laid subsequently. 2. Here, again, dates seem to point conclusively to the fact that the queen was lost or killed on the day the hive was first moved.

Of course, it is not for us to say whether the respective operations referred to were or were not carefully carried out, but it is certain that in early spring bees are extremely sensitive to anything like awkward handling or injudicious interference. We have referred to the matter more fully on another page, to which please refer.

As to what should be done in the second case of loss of queen, there does not seem much to hope for in the "very small queen cell" now in the hive, so we should examine it (the cell) at once—as it will be due for hatching—and if, as we expect, it should prove a barren cell, remove it, give the bees a comb with eggs and brood from another hive, and let them try again. Should they start queen cells, there will be drones by the time they are due.

[997.] *Returning Second Swarms.*—May I trespass upon your kindness by asking a few questions respecting your reply to F. O., Kent (984, p. 128), BEE JOURNAL of March 29:—1. We will suppose the first swarm from the skep is run into a frame-hive. When returning the *second* swarm on the morning after its issue from the skep, would you return the queen of that swarm, as well as the swarm, to the skep? 2. As the old skep would be stuck to floor-board, in order to return the second swarm would you throw it in front of the old skep, or would you adopt any other method? 3. How would surplus queens be got rid of by returning the second swarm to the skep? 4. When, on twenty-first day after the issue of the first swarm, the whole of the bees are driven from the skep, would you place them in frame-hive containing the *first* swarm, or would you run them into *another* similar frame-hive? I have so far refrained from troubling you, hoping your valuable and most useful paper would contain the desired information before transferring time. I propose this year to discard skeps in favour of frame-hives.—FREDK. LEWIS HELPS.

REPLY.—1. Yes. 2. The skep will, of course, require to be released from floor-board and raising up an inch or so in front to allow

the bees to run in. 3. Leave that to the bees. 4. Treat them exactly as a swarm by giving another frame-hive.

[998.] *Using Fermented Honey as Bee-Food.*—I have some bottled honey that I had reserved for bee-food. Some was crushed out of old store combs, and contains a little pollen. The rest was the last few inches left in the extractor. All of it has fermented a little, and smells of beer. Must it be thrown away, or could it be used to make vinegar, or otherwise?—H. O. W.

Reply.—The very presence of pollen in the honey would account for the fermentation under the conditions stated. If boiled along with a little water we should not scruple about using it for bee-food at this season.

[999.] *Bees Propolising "Wells" Dummy.*—1. Please say of what variety is the enclosed bee. It is one from a strong colony I have just bought, the description of which was not given at the time. They are fairly quiet to handle, and are working well. Would you advise queen raising from this stock for my other frame-hives? 2. In looking at a new "Wells" hive I made, I find the dummy supplied by Mr. Wells, although put in but a fortnight since, has its holes filled up with propolis. Seeing this is so, does not this seem a fatal defect since the scent can scarcely be general through both compartments of the hive? 3. What would you do with a queenless stock in a skep? The bees are quiet and carry in no pollen. Should I fix up some of the brood-combs in frames and put the skep on the top of a frame-hive? Comparing my stocks now being stimulated with those that are not, there is a marked difference in the ones fed from the others.—Enthusiast.

Reply.—1. Bee sent is, we think, a cross between Ligurians and Carniolan. We should not hurry to re-queen all other stocks from the stock it came from, till the merits or otherwise of the bees have been tested for a season. 2. If the bees in both compartments are not crowded on to the perforated dummy when first put into the hive, it is almost certain that the perforations will be stopped up. The fatal defect lies in not taking care that both clusters of bees are kept in close proximity to each other. 3. We should examine and see that the bees in skep are free from disease before doing anything by way of utilising them, and, under any circumstances, would do no more than unite them to another stock wanting bees.

Echoes from the Hives.

Privett, Ayling, Hants, April 7—I examined my hives on April 3. Bees have all come through the winter well, having only lost one stock; the hive was full of stores but bees all gone, I think through loss of queen. I find honey is now being stored in combs, which is very early for this neighbourhood. The fine weather is everything a bee-keeper could wish for; the trees are coming into blossom very early.—F. G. Ayling.

HOW TO MAKE BEE-KEEPING MORE PROFITABLE.

Condensed from a Paper read before the Ontario B.K.A. of Canada, by R. F. Holtermann, *Ed. "Canadian B.J."*

Greater exercise of intelligence, greater application, and greater thought, applied to any calling, makes it more remunerative and more profitable. In treating this subject however, it is not my intention to deal directly with that phase of the question. The successful production of any agricultural product depends upon that which lies within the power of man, and that which is bestowed by Divine Providence. After the recent triumphs of our bee-keepers at the World's Columbian Exposition, and after the distinction we have always won when our honey was entered into competition with the world, I need not do any more than remind Canadians that Providence has richly endowed our land with the best climate, soil, and flora under which the choicest honey can be produced in paying quantities. No Canadian will wish to dispute this, no other dare deny it. Those engaged in agricultural pursuits can primarily increase the profits of their calling by decreasing the cost of production and improving its quality, making it more desirable in the markets of the world. To decrease the cost of producing honey we must adopt the best known methods, and then look for still better. There is no doubt that by better methods in preparing bees for winter and better "wintering," an immense gain can be made. At present too often queenless and enfeebled colonies are wintered. The apiary should be carefully examined, and anything of a doubtful nature in this respect destroyed. Next, instead of guessing that bees have enough for winter and finding out when too late that they have insufficient stores, they must be examined and weighed as soon as the combs are fairly free from brood, say about October 1. Any one not able to do this should not keep bees. The capital being the same and without much increase in labour, by proper preparation for winter and care during that season, colonies will come out of winter quarters as strong as many now are when clover blossom opens, and therefore we would be enabled to get in an average season fully fifty per cent. more honey from our apiary.

Again, whilst the entire prevention of swarming will probably never take place, excessive swarming could be prevented by means of room given in the hive at the proper time, shading during the middle of hot summer days, and proper ventilation, and the novice would get honey instead of increase. The

majority of bee-keepers use only one super whether working for comb or for extracted honey. This, in either case, is the falsest of economy. I would sooner have less hives and more supers on them.

Bee-keepers should also turn their attention in the direction of desirable strains of bees. More attention paid to results and less to colour of bee would be a step in the right direction. Where would our milking and beefing breeds of cattle be unless practical utility had been kept in view in breeding? The quality of honey, too, can be improved in various ways. In comb-honey a clean section, free from travel stain, well filled, of even surface and not weighing more than 14 oz. or 15 oz. is desirable. Clean sections can be obtained by having ventilation only from the bottom or entrance of the hive, with clean hives and the bees kept close to the swarming impulse, removing sections as soon as the harvest is over. Even surfaced sections, and sections not too heavy can be secured by means of separators and a section $4\frac{1}{4}$ by $4\frac{1}{4}$, seven to the foot or less. The day has gone by for making comb-honey without separators. It has gone by for a section any wider than above-mentioned. In extracting honey we must be careful not to allow dark and light honey to mix. Nothing has injured the development of our markets more than the practice of extracting honey before it is properly ripe. To talk about ripening honey after taking it from the hive is impracticable, visionary; and to take unripe honey and advocate such a practice only leads to having it placed upon the market in bad condition and stopping its consumption in many homes to which it is taken, to the great injury of bee-keepers.

(*Conclusion next week.*)

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column. Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

GEORGE MOLTON (Tye-green).—If increase of stocks is desired, you cannot do better than allow the skeps to swarm naturally; this they will probably do early if now strong and no super room is given. To transfer the bees, as proposed, would only tend to stop increase. Many thanks for sending particulars regarding the "Good Friday swarm."

F. B. BOOTH. *Treatment of Foul Brood.*—We are sorry to say the successful treatment of foul brood requires a deeper knowledge of the disease than our correspondent appears to possess at present. Mixing phenol *and* salicylic acid in syrup for bee-food is proceeding without much knowledge of the ingredients used, or the reasons for their use, and it causes us to be doubtful as to our correspondent's ability to say with certainty if the disease exists in the hive at all. We should be glad to have a sample of the comb with dead brood in it for inspection before advising further—particularly as we find no reference to "hooking out dead brood" in the article on page 132.

R. HEFFORD.—Comb sent is unmistakably affected with foul brood.

HENRY LINSTEAD (Garboldisham).—*Honeycomb Designs.*—These are advertised in our issue of the 8th ult, by Mr. Cox, of Brampton, Northants.

AMATTER (Sydenham).—There should be no difficulty in keeping a hive of bees in the space stated.

F. JELLICO.—If the frames referred to have proved perfectly satisfactory in your hands, we should not advise any change. Both kinds serve the same purpose. It is merely a matter of personal preference.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

WANTED, Good CARPENTERS or JOINERS, for Bee-hive work. All piecework, at good prices. THOMAS B. BLOW, Welwyn, Herts.

WANTED, a few STOCKS of Healthy BEES, with or without hives, for cash. Address, WILLIAM ROBERTSON, Keirfield Cottages, Bridge-of-Allan. D 51

BEES (Carniolans) FOR SALE. Swarms (including skep), 24s. each; two, 44s. C. MORREY, Five Ways, Neston, Chester. D 52

FOR SALE, a FEW Prime Laying QUEENS, at 5s.; also strong flourishing STOCKS. HY. NEVE, Heathfield, Sussex. D 53

THREE BAR-FRAMED HIVES, Supers and Ekes, Comb and Honey in Frames, Smoker, thirty *Bee-Keepers' Record*, and Appliances. Price £2. 10s. B., 125, Rushey-green, Catford, Kent. D 54

WANTED, CYLINDER EXTRACTOR, in good condition, for cash. THOMAS ELLERKER, Nawton, Yorks. D 55

ENGLISH and ITALIAN BEES for SALE. T. HILL, Scotlands, Cannock-road, Wolverhampton. D 56

FOR SALE, 100 Straw Hives, 1s. each; Observatory Hive for two frames, in black and gilt case, and one single frame ditto, fit for "Royal" Show; also new "Wells" Hive. What offers? H. SEAMARK, Willingham, Cambs. D 57

FOR SALE.—"Wells" Hive, with 20 standard frames and dummy; also Frame Hive, with 11 standard frames; 1 gross 2-lb. Tie-over Honey Jars; six 3s. Frame Box-Feeders; 2 Queen-cages; ½-gross Standard Frames in the flat; 3 Pair Gloves with sleeves; 3 Pair Gauntlets; 3 Bottles "Cheshire Cure for Foul Brood"; 3 Yucca Brushes; Straw Skep with comb; Stand and Zinc Cover; Zinc Skep-cover and Stand; 500 Gummed Labels, "Pure English Honey"; 4 Spray Disfusers; 2 Winter Passage Cutters; Show Case for 12 sections, with spring travelling crate; 2 Supers of 30 ($4\frac{1}{4}\times4\frac{1}{4}\times\frac{1}{2}$) sections. Accept 85s. the lot. Offers invited for portion.—WALTER SIMNETT, 76, Guild-street, Burton-on-Trent. D 50

WANTED, SECTIONS (any quantity), and HONEY in bulk. State price, &c. Orders also given for coming season. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand. 199

600 LBS. BEST QUALITY HONEY. What offers per lb. Sample 2d. APIARIST, Fairspeir, Ascott, Oxford. D 44

Editorial, Notices, &c.

USEFUL HINTS.

Weather.—The warmth and sunshine of a week ago has, here in the south, given place to a cooler temperature and very copious rains, which, however irritating to the bee-keeper who realises only the fact that it has put a stop to honey-storing for the time—is doing incalculable good to the agricultural interests of the country generally. Honey was being stored with tremendous rapidity for a few days in many of the southern counties before the welcome April showers began and put a stop to foraging, and will no doubt be resumed if the weather again becomes dry and warm, while the orchards are still in bloom. But the want of rain was beginning to be so badly felt that bee-keepers would indeed be thinking only of self if they grudged their own small loss when so enormous a majority are benefited by what has in a trifling degree lessened *their* profits. There is also abundant promise of a fine time for the "May gathering" in the present forward condition of stocks. A condition which should encourage entries for the "Royal" at Cambridge and others of our earlier summer shows. It may be well here to remind those desiring to exhibit at the "Royal," that entries may be made up to May 1, with the advantage of having the entry-fees returned should the weather be so unfavourable for honey-gathering as to prevent them from sending their exhibits.

Honey-clogged Brood-chambers.—Judging by accounts received from various quarters in the south, there is considerable danger—in early fruit districts—of queens being cramped for breeding space in consequence of the brood-combs being completely filled with honey. We are told of bees "hanging-out" as if preparing for swarming, but on examining the combs it is found that no cells are left for brood, all being choked up with honey. In such cases not an hour should be lost in clearing two or three frames by putting them through the extractor, uncapping other honey that may be sealed over, and (after replacing the empty combs) setting on surplus chambers so that the bees carry some of the contents of the honey-clogged combs into the upper storey. Where hives have been contracted for winter there is also urgent need just now for attention lest room be wanted for egg-laying.

Spring Feeding and Stimulation.—It is a comfort to hear how little of spring-feeding will be required this year, and, so far as can be gathered from reports coming in, not much spring stimulation either, because of the abundance of income in many parts. The latter fact is not only gratifying but advantageous in every way, seeing that no possible stimulation of an artificial character can approach in effectiveness that given by warm, sunny weather, and the consequent plentiful supply of natural food available to the bees in such bloom as is seen at the present time in the fruit orchards of our southern counties. In later districts, feeding will be very helpful if judiciously done, *i.e.*, by making the syrup thin, giving it warm, and keeping up the supply slowly and continuously as advised in our last "Hints."

Another Wasp Plague.—If the frequent letters now appearing in leading morning papers are to be taken as possessing either accuracy or reliability, we are likely to be "in" for another "wasp plague" this year. For many days past accounts appear of the large number of queens already appearing in their usual haunts, and calling for the extermination of the pests. We don't know how far the exterminating process is to go, but, even for the sake of variety only, it was refreshing to read a plea for the poor wasp in a recent issue of the *Standard*, wherein the writer says:—"While your correspondents are triumphantly recording the number of queen wasps they are daily destroying among their fruit-trees, it may not occur to them that these insects, which they so ruthlessly destroy, are in the act of rendering them a most useful service. At this season of the year the buds and young shoots of fruit-trees are ravaged by various sorts of aphides, &c., and their attacks not only affect the present year's growth and crop, but tend to permanently injure the health of the trees. It is for the purpose of seizing, carrying off, and devouring these marauders that the wasps are

now visiting the fruit-trees, in which so many of them have met their unhappy fate." He also contends that only a small portion of the queens which come out in spring ever succeed in establishing a "nest," and concludes as follows:—"I also venture to think that the destruction of queens at this season serves no useful purpose, but only deprives the destroyer of the good offices of those insects which have found their way to, and are in the habit of frequenting, his fruit-trees."

Having said this good word for the much-hunted *vespa*, we leave bee-keepers to deal with her according to her "merits."

BRITISH BEE-KEEPERS' ASSOCIATION.

Meeting of the committee, held at 105, Jermyn-street, on Thursday, 12th inst., present:—Mr. H. Jonas (vice-chairman) in the chair, Major Fair, Messrs. W. B. Carr, J. Garratt, W. O. B. Glennie (treasurer), E. D. Till, J. M. Hooker (ex-officio), and J. Huckle (secretary).

Communications were received from Mr. Cowan and Mr. P. Scattergood, junr., regretting their inability to be present. The minutes of the last meeting were read and confirmed, the statement of accounts to March 31 were submitted by the finance committee and approved. On the motion of Mr. Hooker, seconded by Mr. Jonas, it was resolved "That the committee do tender to the Rev. Dr. Bartrum on his retirement from the committee, their grateful recognition of his long and valuable services to the association during the many years that he has officiated as a member of the committee." The chairman was requested to communicate this resolution to Dr. Bartrum on behalf of the committee. Letters were read (1) from the secretary of the Bath and West of England Agricultural Society, promising support towards the necessary outlay incurred in providing lectures and instruction in bee-keeping at their annual exhibition to be held at Guildford. Resolved unanimously that the offer of the Bath and West of England Agricultural Society be accepted, and that the necessary arrangements be made by the secretary. (2) From the secretary of British Dairy Farmers' Association, soliciting the support of the British Bee-keepers' Association towards the fund to be offered as prizes for honey at the annual Dairy Show of 1894. It was resolved to suggest to the Dairy Farmers' Association that classes be arranged for the exhibition of honey in commercial packages of 7, 14, and 28 lb., suitable for the wholesale trade, and that, subject to the adoption of the proposal, the British Bee-keepers' Association would contribute a specified sum towards the amount awarded in prizes.

The Exhibition Sub-committee presented their report, recommending that arrangements be made for holding a meeting of bee-keepers in the show-yard at Cambridge,* and also at Canterbury, in connection with the exhibition of the Royal Counties Agricultural Society to be held at Canterbury. Resolved that the proposals of the Exhibitions Committee be adopted.

The following new members were elected, viz:—

Mr. A. Allott, Kesbro, near Barnsley; Mr. C. Long, Cottenham, near Cambridge.

Arrangements were made for conducting the annual examination of candidates for first-class certificates to be held in London on May 10.

* This meeting will be held on either Wednesday or Thursday in the show week, as convenient to the Royal Agricultural Society.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see* 1*st page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

A DWINDLING STOCK.

QUERIES AND REPLIES REVIEWED.

[1818.] I started the JOURNAL with the new year, and in consequence of having kept bees in skep for some year or so, so that I might learn "how to do it," the query and your reply (996, p. 147) this week makes me place before you a few observations, and if you can help me I shall feel much obliged.

Last autumn I put together two stocks from skeps in a frame-hive, made sure of one queen being there, and fed with about 16 lb. of syrup. They wintered well, were strong in February, and busy carrying pollen only about four weeks ago; since then I find on examination that only about a handful remain, yet there are young bees and brood (and dead brood), plenty of stores, but they only consumed about 1 lb. of candy given in January. I find no trace of a queen; so inquire for your verdict? Also, what I can best do with the hive? Await swarms, or make an artificial

one from a skep? which I see is fast coming on to swarm. Referring to the skep mentioned, I see, on the ground, in front of it, quite a tablespoonful or more of pollen dropped by the bees. The entrance is free enough, and I should like to know how you account for it, as neither of the other hives is like it, and I have noticed but very little robbing.

And in your reply to 997 (p. 148) will you kindly explain why you do not advise uniting the stock, twenty-one days after, with the swarm in the frame-hive? My idea was that, if the old queen were removed from the swarm, and the stock with the young queen united with them, they together would work faster and better, and store more freely during the honey flow than would be the case if working in separate hives. — W. H. M., *Glastonbury, April* 14.

[If a piece of comb containing the "dead brood" mentioned is sent, it will assist us much in arriving at a verdict, and in advising as to your future dealing with the hive. We cannot account for such quantities of pollen being found on the ground—nothing but an inspection of the skep would enable us to offer any explanation of so unusual an occurrence. We deprecated adding the bees to the original or top swarm because, under the circumstances detailed, they would be quite strong enough in themselves to form a good stock; besides seeing other obvious advantages in the course we recommended.—Eds.]

A CASE FOR THE BENEVOLENT.

[1819.] I have just received a letter from an old friend and bee-keeper, with whom I got acquainted at the first Crystal Palace show in 1874, and whereat he was a notable prize-winner. He has been trying for the last three years or more to get his daughter admitted as an inmate of the Earlswood Asylum for Idiots. He tells me the next election takes place on April 26, and as the case is a most deserving one, I thought if you would kindly insert this letter, asking ladies or gentlemen who, being readers of the B.J., have votes, they might, after inquiry into the merits of the case, kindly give them in the interest of Bertha Martin, aged 18, daughter of William Martin, a cottager bee-keeper, Well Cottage, Downley, High Wycombe.—John Walton, *Weston, Leamington, April* 11.

NATURAL STIMULATION.

[1820.] I am particularly and personally interested in Mr. Henry Neve's report of early honey from the willows (No. 1,811, p. 145), having recently secured a location in the Heathfield district for the establishment of a large apiary. When visiting the place at the latter part of winter I noticed the great abundance of these early pollen-bearers—a sight I had missed for many years. I do not think there is anything of greater advantage in early spring for waking the bees up to the fullest activity, but it is only in such unusually mild springs as this and the last that any amount of liquid store is secured from that source.

In this district (Seaford) we have little in the way of natural assistance until the field crops come in: but then in the autumn honey is stored heavily long after the bees in wooded districts have been lying idle. In Mr. Neve's locality I should want to help those natural resources (as I hope to do in my own case), and use up much more of the early stores in developing a larger brood-nest in preparation for the greater harvest to come. My experience has been that where the brood-chamber is overcrowded with stores early in the season, the bees are placed at a great disadvantage, and seldom do so well thereafter, as the owners anticipated. "Plenty of honey in the willows and warm sunshine," as Mr. Neve says, cannot fail to stimulate the bees to great activity; but where those blessings are not enjoyed, many a bee-keeper has to thank his own exertions for bringing up his stock to the right condition in time for the first honey-flow.

That those golden willows may continue each year to yield their bounteous gifts, and that the merry sunshine may always smile upon the winged labourers in their frequent journeys while gathering the harvest, is the earnest wish of—S. Simmins.

HOW TO MAKE WHITE MEAD.

[1821.] The following recipe for making white mead is a hundred years old; I have tried it myself and found it a good one; you might perhaps insert it in Bee Journal:—"Take a gallon of honey and 8 gallons of water, put on together in a kettle, and boil it well till it comes to 6 gallons; then pour it out into a large vessel of earth or lead, let it stand till it is almost cold, then put to it a little yeast to make it work; when it has worked a while put it into a barrel and stop it close. Let it stand five months, then bottle it off and put into every bottle a clove and a little lemon-peel."—T. Hill, *Wolverhampton, April* 15.

HOPEFUL PROSPECTS FOR THE COMING SEASON.

[1822.] In our little village, I am glad to say, no feeding is wanted this spring, as all the bees I have seen (and they are not a few) are storing honey more like midsummer than April, including my own. One of my stocks has had a box of shallow frames on all winter. I cut all comb out of it at the end of last season, and gave the bees the dripping frames back to clean up. On looking into this hive on the last day of March this year, in order to remove the frames and put foundation in them, I found that the bees had more than half-filled them with honey and comb, built

nearly as straight as the bars. If the present fine time continues I shall have a full crate of shallow frames to take off in a fortnight's time, or less. I do not remember ever to have heard of such an early season. I may say the stock mentioned is a very strong one, and was also a strong one in the early part of last year, when on a hot day in June I raised the quilts and cover a few inches to give the bees air, and, behold! a strong stray swarm took possession of the roof and joined the stock. The combined forces then settled down quite peaceably, and went to work with a will; and I think I never saw such a mass of bees, not being able to part them, so gave plenty of room, and they did well. They are also giving me every promise of doing better this year. I have put crates of sections on one or two others of my neighbours' hives. Wishing you and all other bee-keepers a prosperous year.—THOS. ADAMS, *Railway Cottages, Ely, near Cardiff, April* 10.

BEE PROSPECTS IN BERKS.

[1823.] I have just made a first examination of all my hives, three weeks later than I did the same thing last year, as I then lost four queens by disturbing them so early. They have come through the winter very satisfactorily. All are strong, healthy, and very forward, with a large quantity of brood in every hive, some having seven frames of brood. Drones are out, and two queen-cells started in one hive. Little feeding wanted if this warm weather lasts, as bees are getting honey fast. Horse-chestnut and apple coming into bloom. I am hoping we shall have a better honey-year than in 1893, which was the worst year I have experienced since taking to the bar-frame hive; my average was under 20 lb. per hive last year.—G. HEAD, *Winkfield, April* 14.

DO BEES HEAR?

[1824.] Referring to Mr. Bois' article, "*Do Bees Hear?*" on page 95 of B.J. for March 8, the question meets an authoritative answer in Gilbert White's letter, No. XXXVIII., dated from Selborne, February 12, 1778. His letter is on the subject of an echo, and he remarks:—

"One should have imagined that echoes, if not entertaining, must at least have been harmless and inoffensive; yet Virgil advances a strange notion, that they are injurious to bees. After enumerating some probable and reasonable annoyances, such as prudent owners would wish far removed from their bee-gardens, he adds:—

——— "'*aut ubi concava pulsu*
Saxa sonant, vocisque offensa resultat imago.'

"This wild and fanciful assertion," Gilbert White goes on to say, "will hardly be admitted by the philosophers of these days, especially as they all now seem agreed that insects are not furnished with any organs of hearing at all. But if it should be urged that, though they cannot hear, yet perhaps they may feel the repercussion of sounds, I grant it is possible they may. Yet that these impressions are distasteful or hurtful I deny, because bees in good summers thrive well in my outlet, where the echoes are very strong, for this village is another Anathoth—a place of responses and echoes. Besides, it does not appear from experiment that bees are in any way capable of being affected by sounds, for I have often tried my own with a large speaking-trumpet held close to their hives, and with such an exertion of voice as would have hailed a ship at the distance of a mile, and still these insects pursued their various employments undisturbed, and without showing the least sensibility or resentment."—A KENT BEE-KEEPER.

APPLIANCE DEALERS

AND THEIR CUSTOMERS.

[1825.] I do not wonder at bee-keepers crying out at the treatment they receive at the hands of appliance dealers if they deal with the manufacturer whose name I enclose.

I sent him an order for appliances early in January, and after sending me a receipt he took no further notice, until I called the attention of our editors to the subject, though I wrote three times to know when my order would be fulfilled. After our editors called the attention of the dealer referred to to this matter, he coolly wrote to me to say, "He did not intend running away with my money, and had he known I was in want of appliances, he would have sent on before." This in itself was not true, as he did know. I have heard nothing of appliances up to this date, 10th inst., and have stocks ready for supering, and there is a fine flow of honey from fruit blossom.

I am quite aware our editors cannot help these things; yet I think it only right they should know how readers of our JOURNAL are sometimes served by those who advertise therein.—W. G. KIGHT.

WEATHER REPORT.

ABBOT'S LEIGH, HAYWARD'S HEATH, SUSSEX, 1894.

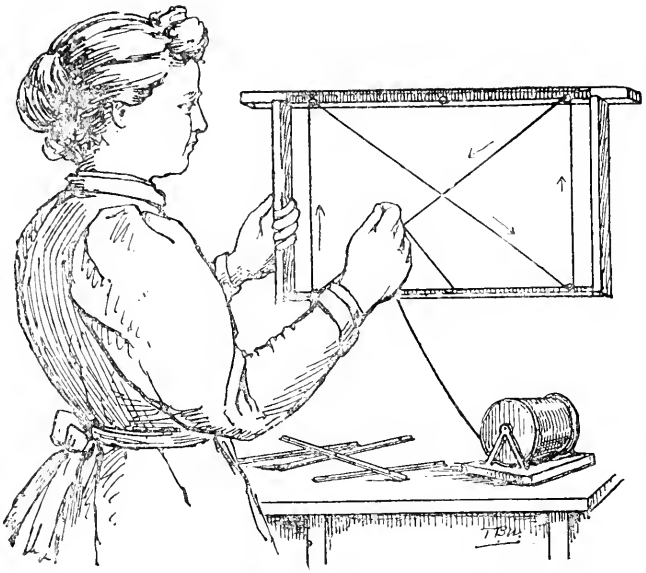
	Week ending Mar. 24.	Mar. 31.	April 7.	April 14.
Max. temp.	... 58°	62°	70°	72°
Min. ,,	... 27°	32°	38°	36°
Mean max.	... 51·5°	60·1°	66·5°	46·1°
,, min.	... 35·1°	35°	40·1°	42·1°
,, temp.	... 43·3°	47·5°	53·3°	53·1°
,, sun.	... 62·5°	77·6°	78·6°	76·2°
Rain (in.).	... —	·06	·03	·34
Wind, ...	...N & NE	NE	N&NE	NE&SW

R. INGLIS.

NOVELTIES FOR 1894.

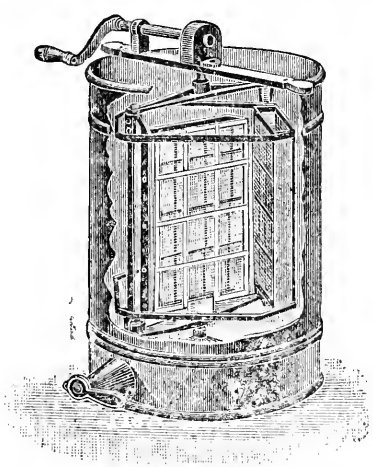
MEADOWS' NEW METHOD OF WIRING FRAMES.

The inventor of the above, in describing the method of wiring, says:—"The difficulty hitherto has been to know how to wire frames easily and with little trouble. This has been overcome, as is made clear in the sketch. Another difficulty has been in getting the frames to stand the wiring. This is remedied by the introduction of two small tin girders which fit into the top bar through the slot made for foundation, and another takes the place of the wood bottom bar, which is not really necessary, but can be split through and half put on each side of girder."



THE NEW "COWAN" EXTRACTOR.

This machine is made on the principle of that designed by Mr. Cowan in 1875, with several important improvements added. Besides the addition of Meadows' patent backing to the cages, the principal new feature introduced is a special gearing, which is turned at the side of machine. The cages are reversible, so that both sides of frame can be



extracted without taking out to turn. The cages may also be instantly lifted out for cleaning, or to pack pieces of comb in. They can be re-fixed when full. The whole inside may be removed by unscrewing two nuts, so that cylinder may be used for other purposes.

Queries and Replies.

[1000.] *Catching Swarms from Hollow Tree.*—1. A large swarm of bees about three years ago settled in a hollow tree, the aperture being about 30 ft. from the ground. Last season a swarm came out twice, but returned to the hole. Can any one suggest a way of catching the next swarm? Would an empty hive be of any use placed near the tree? 2. Which is the best kind of foreign bee; also the best way of introducing them? 3. What advantages can they claim over the English bees? 4. Can they extract honey from the red clover, or from any plants that the English bees cannot? 5. In which numbers of your BEE JOURNAL could I find good accounts of foreign bees? 6. Which would be the best variety to cross with the English, and the best way of doing it? The climate here is very mild. 7. Which pays best to work for, comb or extracted honey?—BEE-KEEPER, *Cardiff, April* 11.

REPLY.—1. Under the circumstances, keeping a look-out for the swarm and securing it in the ordinary way after clustering is the only plan of "catching" we can suggest. 2. By those who like foreign bees the Carniolan is often preferred on account of its quietness, but it is much given to swarming. Some, however, choose the Ligurian in preference. 3. Not a few experienced bee-keepers consider they possess no advantage whatever over the native bee for use in this country, but rather the reverse. 4. No. 5. Our journal of late years contains more adverse accounts than

otherwise of foreign bees, but we cannot undertake the labour of searching out the pages wherein such accounts appear. Advocates of the Ligurian bee declare that failure with that variety in this country arises from the difficulty in obtaining queens of a really good strain. 6. As already stated, it is a matter of personal preference; there is no "best" foreign bee to cross with the native. Crossing is effected by introducing the foreign queen to a native stock. 7. It depends on which is in most demand in your neighbourhood. Extracted honey is the most reliable kind to work for, as it takes no harm by keeping as comb-honey does.

[1001.] *Brood cast out of Skep.—Taking Bees to Heather for Profit.*—1. I have noticed several grubs of brood cast out of a strong stock in a skep after supering it. I am at a loss to know what this indicates. Can you help me? Honey is being stored, and the bees are working well and peaceably. 2. If bees discard the syrup-bottle, does that suggest it is better not to press it upon their attention, but stop stimulative feeding? 3. Where are the best districts for heather in the Midlands? 4. Would it be worth one's while taking a couple of stocks, say, fifty miles to secure another take of honey after the usual clover flow?—ENTHUSIAST.

REPLY.—1. It indicates either lack of sufficient income, or a sudden lowering of the temperature of the hive, caused, perhaps, by supering. 2. Bees should not refuse syrup at this season. Mayhap they cannot get at the food, or it is not readily accessible. 3. Perhaps some bee-keeper located in the Midlands will kindly reply as to good heather districts. 4. We cannot advise taking two stocks fifty miles to the heather, if profit only is studied.

[1002.] *Finding Queens on Combs.—Artificial Swarms for Beginners.*—Being a new beginner in bee-keeping, I have got the "Guide-Book," and it describes the queen, &c. I had a look on April 11 to see how my only stock was getting on and find the queen if possible. I looked very carefully, but could not see her, as the combs were so thickly covered with bees. I therefore ask, Which frame would be the most likely frame she would be on, as I should like to make an artificial swarm? but if I cannot find the queen I shall not be able to do it.—R. M. C., *Boston, Lincs., April* 13.

REPLY.—Beyond saying that the queen is usually found on one of the combs where eggs are seen in the cells, the other indications of her probable presence are only acquired by experience. We must also observe that it looks very like courting failure for a "new beginner" to launch off into artificial swarming operations so soon after commencing bee-keeping. There is no road to success in the craft so easy of travel as our correspondent apparently supposes, and he will do well to defer swarming his bees artificially until he has hived a natural swarm or two. It should be borne in mind that the advice given in the "Guide-Book" presupposes the bee-keeper to have had some experience of the work of handling bees before undertaking such operations as that referred to.

[1003.]—*Removing Honey from Brood-frames.*—In each of my four hives I find brood, but the greater part of combs are filled with honey. Ought I to put any of the frames through the extractor, or will uncapping some of the honey each day do? The bees have been very busy this fine weather, and have gathered a good deal of honey. In two of my hives I found the boxes which had contained candy had been filled with new comb and honey. Queen wasps are very plentiful; I have already killed sixteen of them.—C. PAYNE, *N. Devon, April* 12.

REPLY.—If the queens are cramped for egg-room some of the honey-charged combs should be put through the extractor without delay. We should operate on no combs containing brood so far as extracting, but clear some of the others; and, if necessary, uncap some of the sealed food in the former, allowing the bees to remove it themselves into the emptied combs. The stocks should have surplus room given them if storing is going on so rapidly as described; but carefully avoid chilling the brood-chamber in all you do.

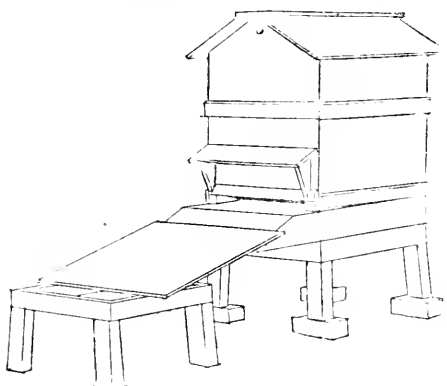
[1004.] *Loss of Queen in "Wells" Hive.*—Upon examining the bees in my "Wells" hive to-day (April 10), I found one compartment minus the queen. The frame next the perforated divider had six queen-cells on it, four of which were capped. In the same hive was also a small patch of drone brood already capped over. 1. Do you think the drones reared in this hive will fly in time to fertilise the queens? 2. If not, would it answer if I obtained half-a-dozen drones and introduced them to the hive? If you think the latter plan the safer, perhaps one of your numerous readers could let me have a few drones, I would gladly pay postage, &c.—H. J. FREEMAN, *Norwich, April* 10.

REPLY.—1. Yes; there is every chance of the queen being fertilised if weather is favourable. 2. For several reasons, which we need not go into, it is very unlikely that any good would result from the plan proposed.

[1005.] 1. *Hiving Swarms in Frame-hives.*—Having recently purchased a "W.B.C." hive, I am anxious to know whether a movable division-board should not be used in the body-box to contract the space? 2. What is the object of the two strips of wood provided by the makers in addition to the frames? 3. What should be the size of a good swarm that I propose to purchase? 4. What is the best

method of hiving a swarm into this particular kind of hive? As I am making a start in bee-keeping, I should be obliged for any hints. —IGNORANT, *Cowbridge, April* 12.

REPLY.—1. A division-board may be used whenever needed, but there is no actual necessity for providing permanent room for it in the hive, as that means enlarging all body-boxes and surplus chambers. 2 The "strips" referred to are for inserting between the shoulders of the metal ends on outer frames and the hive sides to increase the distance between the latter and the face of comb. Without them the bees are apt to build brace-comb, or attachments, to the side of the hive. 3. The larger the better if a natural swarm; if an artificial one, bought at a given price, it should not weigh less than 3 lb., while all beyond that weight makes the swarm more valuable. 4. Prepare the hive as in sketch, where the entrance slides are used to prop up the front of outer case 1 in. or more. Provide a temporary platform, in some such fashion as



shown in the cut, and cover the board inclined in front of the entrance with a table-cloth large enough to hang over the sides of platform. Shake or throw the bees on to the latter, and they will soon run in.

[1006.] *Bees Hanging Out in April.*—1. In the second week in February I saw several drones on the entrance-board of my strongest stock. Can you tell me why they appeared so early? 2. All my stocks were strong at end of February. I fed them for a week on syrup. I then had to leave home for a fortnight, consequently feeding was stopped. On my return three stocks had dwindled down very much, but I think they will work round, as they are now all taking in pollen well. Was it the stop in food that caused the dwindling? 3. One straw skep has had about a gallon of bees hanging out for a time, but they do not swarm. Are they waiting for drones, or queenless?—BEES-WAX, *Dover, April* 12

REPLY.—1. Simply because the stock is in very forward condition. 2. It is quite possible the increased breadth of brood requiring attention after stimulating has caused extra wear and tear to the bees and consequent loss of numbers. 3. The bees are waiting for you to give them more room for working in. Queenless stocks never "hang out."

[1007.] *Comb Built in Candy-frame.*—What should I do under the following circumstances with regard to one of my hives? A frame of candy was given to it last year, and where it is eaten away (the lower half) is now filled with drone comb, and drones are hatching. 1. How shall I get rid of this misshapen comb? The adjacent combs to the latter were so drawn out in places as to project into the upper part of it where the cake of candy was thin. The projecting pieces of comb containing honey I cut off level with the surface of the wood frame, and dropped them on the floor of the hive at the back. 2. Will the bees clean this up? I gave each of my hives a half-filled frame of honey (uncapped). 3. Do they require any syrup as well? They seem to be breeding very fast. 4. Could I boil up spare candy (broken) to make syrup? Fruit-trees are well in bloom here.—G. H. STRONG, *Twickenham, April* 9.

REPLY.—1. If the upper portions of frame is filled with bee-candy, and the lower half with misshapen and undesirable drone-comb, obviously the best way of ridding yourself of it is to remove the frame, cut the whole out, and replace with a sheet of comb foundation. 2. The bees will clear out the honey, but if pieces of comb remain on the floorboard they should be removed, or the bees may attach them to bottom bars of frames. 3. Not if honey is being gathered. 4. Yes.

[1008.] *Early Drones in the North.—Putting on Supers.*—Last Wednesday, the 11th, I transferred the contents of a Wells hive, and, on looking to-day into the old hive, I found five dead drones in one side. 1. Is not this very early for the north, and does it portend early swarming? 2. When should supers be put on up here?—CUTHBERT BEDE, *Durham, April* 15.

REPLY.—1. Other conditions connected with the appearance of drones being normal, April certainly is early, and it betokens forwardness in the stock and preparation for swarms. 2. Do not super until the hives are populous and honey is coming in, which latter point will be shown on raising the quilt and observing the outer edges of the combs being added to with light-coloured wax.

[1009.] *Carbolic Acid Solution for Quieting Bees.—Supering Skeps.*—1. Kindly tell how to prepare the solution of carbolic acid for quieting bees? 2. Do you consider it better than the smoker? 3. Do you dip the cloth in and wring it dry before using it? 4. I have six stocks in flat-topped skeps; could I work shallow-frames on some of them with success?

How many frames on a skep ought I to put, and ought I to put queen-excluder zinc over hole on the skep? 5. I have a stock on seven frames with combs not quite built out last autumn; the bees are now busy drawing them out to bottom; when ought I to add the three remaining frames? 6. A friend of mine has a "Little Wonder" extractor; would that do for extracting such frames? I have been a constant reader of BRITISH BEE JOURNAL for the last six years, and I don't know what I should do without it.—A DORSET BROTHER, *April* 14.

REPLY.—1. The ingredients are 1½ oz. Calvert's No. 5 carbolic acid, 1½ oz. glycerine, 1 quart of warm water. Mix the acid and glycerine well before adding the water. Shake the bottle before using. 2. We prefer the smoker. 3. Yes, but do not wring it "dry." 4. Your success will depend largely on making the box of shallow-frames warm and snug for the bees to work in it, and getting them to pass readily through the queen-excluder. The latter is, of course, a hindrance, and you might dispense with it if the queen has plenty of egg-room below. 5. They should be given at once, and should be fitted with full sheets of foundation, or you will have too much drone-comb built. 6. Yes.

[1010.] *Re-queening Stocks.*—I have several stocks I want to re-queen this season with as little loss to my harvest as possible, or to next year's prospects. When is the best time to remove queens in order to do this, and enable the bees to re-queen themselves?—M. H., *Tunbridge Wells, April* 16.

REPLY.—A fortnight before the income of honey begins to show signs of slackening off for the season is the best time. Or it may be safely done after the removal of supers in July, if bees are fed (in case of scarcity) and drones are plentiful at the time.

HOW TO MAKE BEE-KEEPING MORE PROFITABLE.

(*Concluded from p.* 150)

Well ripened honey is a food which has already undergone the first stages towards digestion. It has also in it essential oils distilled by flowers, and whatever its source may be it has virtues which unripe honey or other sweets can never imitate. We have all the difficulties to contend with that those engaged in other branches of agriculture have, and yet the latter have the assistance of men specially engaged in discovering the hidden secrets in their calling, making investigations which shall enable those engaged in that calling to produce better articles for less money, and to do battle with the difficulties which crop up owing to the times we live in. But not so with apiculture. Let the bee-keepers of the province of the Dominion make their voices heard in this respect. Bee-keepers are a peculiar people, and theirs is a peculiar calling. The wheat grower—indeed, the producer of almost every other crop upon the Canadian farm—is at least free from the suspicion of adulteration; but bee-keepers, be their produce as free from adulteration as it can, have to contend with public opinion, which is ever ready, through ignorance and evil thought, to suspect wrong. We have had to fight this in the past and have been able to do so with some degree of comfort, but recently this has become a more difficult task; difficult, because some calling themselves bee-keepers have adopted methods of adulteration which did not even suggest themselves to the honey consumer. These methods have assumed first one guise and then another; at one time it is to fill unfinished sections by giving a bye-product called by that untruthful name "sugar-honey." At another, the use of the same product is suggested as being necessary to keep extracted honey from granulating when fed back; but the trail of the serpent is over it all, and if we compromise with principle you may be sure we will suffer as bee-keepers. There is but one course for the honest, uncompromising bee-keeper, who must show himself to the public as in no way countenancing the fraud. To him such a suggestion must be a crime against morality. He must show that in no way will he support such an idea or support a man, be he king or peasant, who has so lost all sense of right as to refuse to see the evil of such a suggestion.

Failing this, he must have the stigma rest upon him that he openly supports or secretly winks at adulteration, and as soon as Canadian bee-keepers do this they must say good-bye, not only to an enlarged home market, but a large proportion to the market they now have. They must also say good-bye to the foreign market within their reach. There are only two paths, the honourable and upright, yet uncompromising, one which will lead our bee-keepers still higher in the moral scale, or the downward. Our markets are peculiarly interesting to bee keepers. Anything influencing them for weal or woe must increase or diminish the profits to be derived from bee-keeping. It will not be here wise to mention the lowest figure at which first-class honey has changed hands during the last few years, but I am safe in saying that there are numbers of bee-keepers who will be willing to sell their crop in bulk free of all expense at six cents per pound. That as the methods of production improve, in other words the cost of production decreases, and through experience the risks are lessened in any calling, competition must reduce the price. Yet aside from this the uncertainty of a market has tended to depreciate the value of honey in Canada. Those selling have been beaten down in price, often through misrepresentation as to what others are selling at. If there was a standing offer of six cents per pound net for our surplus honey, it would be a great relief to our country. Let me also

say that our home market is not developed as it could be by united effort on our part to produce a well ripened honey, and bring it more prominently before the public. I could not help thinking when Prof. Robertson was delivering a lecture on cheese and butter as a food, how much could be done for bee-keepers by placing the value of honey as a food before the public. Could we not do good by uniting more in bringing this matter before our people? Next, we allow too small a margin to the retailer; 10 cents per pound is not too much for honey, in fact the price is low, and if any cutting has to be done let us allow the retailer more. This will be a step in the right direction.

RENDERING BEESWAX WITH ACIDS.

I wish to take exception to the item on purifying wax with acids, as given on page 138. We do not believe in this practice unless it is absolutely necessary, owing to the wax being mixed largely with residues after having been improperly rendered. Combs may be rendered into wax just as well without the use of acids—at least we can, and always do, render all our combs with only pure water, and always succeed in getting bright yellow wax from them even if they are dark.

Although the acid does not practically deteriorate the wax, it so completely removes all other substances that it takes away all its perfume, and the honey and bee odour which is so pleasing and attractive to the bees. We have, hundreds of times, smelled the odour of the honey in foundation. Such would not have been the case had these cappings been rendered with acid, but, on the contrary, there would in many cases be a little sour smell remaining. Every one of the hands in our shop remembers the fine perfume which pervades our shops whenever we have a chance to handle a ton or two of Southern California capping-wax.

At a meeting of some local Michigan association, a few years ago, some one made the remark that we must use honey in lubricating the rolls of our mills, because our foundation smelled so sweetly of honey, and was so readily accepted by the bees. The credit of this sweet smell did not belong to us, but to the parties who had rendered this wax. All our credit in the matter consisted in preserving this good flavour as much as possible.

If the practice of rendering combs with acid becomes universal, the quality of the wax will be greatly lowered, and we can assure Mr. N. S. H. that bees will not accept comb foundation made from such wax as readily as when it retains the bee and honey smell. If much of acid-rendered wax should come on the market, we should certainly offer less for it than for the other grade.

We will gladly give directions for rendering combs with water in a satisfactory manner to any one who may desire them.—C. P. Dadant, *American Bee Journal.*

[As the information that Brother Dadant could give about rendering wax with only water would doubtless be interesting and helpful to all our readers, we suggest that he send us the directions for publication in the Bee Journal. Being the largest comb foundation makers in the world, whatever comes from the pens of Chas. Dadant & Son on this subject could be implicitly relied upon.—Ed. A. B. J.]

[In response to the above request, Messrs. Dadant & Son subsequently contributed the following article on the subject of

RENDERING COMBS INTO WAX,

which appeared in the next issue of the *A.B.J.*—Eds. B.B.J.]

The very best method of all to render clean comb into wax is by sun-heat. The sun wax-extractor of some shape is an indispensable adjunct of a well-conducted apiary. The only case in which the sun wax-extractor can render no service of any value, is when the combs are so old and thick that all the wax, when melted in the sun, would be absorbed by the residues. In this case we melt the combs with water. In the first place, the combs should be crushed as well as possible while cold and brittle, to break the cocoons or cast-skins of the larvæ, which, if left entire, would in many cases encase small particles of wax which it would be impossible to dislodge. Then these combs should be soaked in water for a few days to dampen all the impurities and prevent them from becoming soaked with melted wax.

The wax will be lighter if clean water is used when melting, as the water in which the combs are allowed to soak will be quite darkened by the soaking.

The combs should be melted in soft or rain water, in any kind of tin or copper boiler, the boiler kept about two-thirds full, and heated slowly to prevent boiling over. If the floor around the stove is kept wet, any wax that may drop may be easily peeled off. During the melting, lower into the boiler a sieve made of a piece of wire-cloth bent in the shape of a dipper, from which you will dip out the wax with a ladle as it strains into it. If the whole is thoroughly stirred and well heated with plenty of water, very little wax will be left.

The wax that is dipped out can be put into any kind of a vessel, and later on remelted with water and allowed to cool slowly to thoroughly purify it. The slower the wax cools, the cleaner it will be, as the impurities settle to the bottom. As a matter of course, cappings and bright combs can be rendered in the same way.

When wax is once damaged by burning, it is very difficult to bring it back to its natural colour without the help of acids, and for this reason it is important to melt it properly the first time.

The above directions have been given by us to a number of our leading honey-producers who had found it difficult to render their combs

properly, and we do not know of a single instance where they have not succeeded, when the directions were properly followed.

We would advise all bee-keepers to have a special vessel or boiler, in which to render up their wax, which should be used for no other purpose, for it is very difficult to cleanse a boiler that has been used for wax so as to employ it for other purposes, and the housewife cannot be blamed if she objects to her wash-boiler being used in anything relating to the honey-bee.—CHAS. DADANT & SON, in *American Bee Journal.*

COMB HONEY EIGHT YEARS OLD.

We have just finished eating a three-pound box of comb honey that was eight years old. It has been kept, too, under unfavourable conditions a part of the time, having been moved from kitchen to garret several times, and last summer, while we were building, it was exposed to all the changing moods of climate for three months out-of-doors. But it would not stand everything. In handling it somehow got broken, began to leak, and we were obliged to eat it to save it—as the lion protects the lamb. The honey was all right. No one at the table suspected that it was old. It was not granulated in the cells, and I think never has been.

This is no remarkable affair, I suppose. Probably most bee-keepers know that honey can be preserved almost indefinitely if properly taken care of. By the way, I believe I have now an almost ideal place to keep honey in—an attic, where it will always be dry and warm—under a tin roof.—EUGENE SECOR, in *American Bee Journal.*

Bee Shows to Come.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries close May 31. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries close May 1. Post entries at double fees till May 12. Secretary, John Huckle, B.B.K.A., King's Langley.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column. Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

A CORRESPONDENT inquires if bee appliances can be obtained in Sheffield, and where. Perhaps some reader will kindly supply the information required.

SANNYER ATKIN (Highgate).—*German Bee Journals. — Illustrierte Deutsche Bienenzeitung*, by Gravenhorst; subscriptions to be sent to Schwitschke & Sons, Brunswick, Germany; monthly. *Bienenzeitung*, by Vogel, Beck, & Co., Nordlingen, Germany, fortnightly. This is the organ of the German and Austrian Bee Society.

C. H. (Wilts).—*Foul Brood.*—If the bees are strong at this season, we should remove all the combs and put the bees on full sheets of comb foundation, and feed. Use the N. Beta as directed in preparing syrup for food.

G. HEAD (Winkfield).—*Honey Samples.*—No. 1 is good in colour, but possesses very little real honey flavour, and none of its aroma. No. 2 shows signs of slight fermentation, and is not a good flavoured honey.

NOVICE (Norwich). *Super Foundation.*—Sample of foundation sent is very good.

AN ANXIOUS ONE (co. Mayo).—1. Syrup-food is most suitable at this season. To make:—Add 3½ pints water to 5 lb. refined cane sugar; boil one minute, then add ½ oz. each of vinegar and salt. 2. Candy burnt in making is entirely unfit for bee-food, and should be removed at once.

E. HANCOX.—Comb sent is unmistakably affected with foul brood.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

FOR SALE, HONEY-COMB DESIGNS. Fit for Royal Show. From 1s. per Letter. Two-Framed Observatory Hive, new, black and gilt. H. SEAMARK, Willingham, Cambs. D 64

SWARMS, 3 lb., 10s. 6d., STOCKS, young queens, in Gayton hives, full of bees, 25s. each. ROSE, Feltham. D 63

FOR SALE.—500 best white basswood 1lb. SECTIONS (Blow's), four bee-way, grooved, 7s. 6d., or 100 for 2s. OBSERVATORY HIVE, takes one standard frame, cost 10s. 6d., sell 6s., all new. W. HINSON, Westholm, Reigate, Surrey. D 59

EXCHANGE new Roger's FRETSAW, nearly new, for strong STOCK ENGLISH BEES in Skep. MOORE, 44, Worcester Street, Bromsgrove. D 62

WANTED to EXCHANGE splendid Humber pattern TRICYCLE for five good STOCKS of BEES in Barframe Hives, together with a Cylinder Extractor. Apply, J. & F. GREGORY, Millstone Manufacturers, Hathersage, near Sheffield. D 61

BEES FOR SALE. Strong stocks in standard frame hives, ready for supering, 25s. to 30s. each. Good stocks in skeps at 15s. and 20s. each. BERRYMAN, St. Columb. D 60

HONEY-COMB DESIGN.—LONDON for a design, a grand thing with every instruction, post free, 10s. Apply, CHARLES COX, Brampton, Northampton. D 58

WANTED, SECTIONS of COMB HONEY (any quantity), and HONEY in bulk. State price, &c. Orders also given for coming season. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London. 199

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles post free. T. HOLLIDAY, Astbury, Congleton. 187

STOCKS, NUCLEI, SWARMS, and QUEENS FOR SALE. Address, The Rev. C. BRERETON, Pulborough, Sussex. 192

Editorial, Notices, &c.

ASSISTING BEE-KEEPERS.

The remarkably uncertain character of the weather during the last few days, and the effect it has had on the hopes and prospects of bee-keepers and bee-keeping, causes us to reflect on the way in which we can best render assistance by advising them "what to do, and how to do it." We are, however, at the very outset confronted with no end of difficulties, because of the impossibility of accommodating our advice to the varying surroundings of those whom we address. This very trouble calls to mind a communication received some time ago from a correspondent—whose kindly meant desire to help us is here gratefully acknowledged—wherein the writer expressed his views as to the way in which the BEE JOURNAL might be made more interesting and generally useful to readers by making certain changes in the arrangement of the matter, and in other ways. We need not here enter into all the proposed alterations, but one item in particular strikes us as illustrating the difficulty of doing that which we so earnestly desire to do, as stated above. Our correspondent starts out with the plan of having at the head of the first page of every issue a short calendar of operations for the week following that on which the JOURNAL appears, and gives the details thus:—"Work for the week ending April 26. District, Kent.—North Counties a week later:—

1. Continue feeding; or commence at once.
2. Supply artificial pollen.
3. See that water supply is constant.
4. Be on guard against robbing, &c., &c."

He then goes on to say:—"I need not point out the advantages of such a thing—they are self-evident. The "knowing ones' and the 'old hands' may or may not cry 'Bosh,' but beginners will hail with gladness this small but *most* important support to their tottering steps. No longer will the cry be 'When shall I do this or that?' or your answer be the oft repeated 'You are too late!'

Every one will be abreast of the times, and the advantages to our industry will be, to say the least, of great importance. I know what applies to your apiary may not exactly suit mine to the very day, but surely I can estimate the difference for myself without going a mile out of my way."

This is, of course, very good and well meant, but, even with the disadvantage of having only to regulate the week's work two or three days before the BEE JOURNAL is in the hands of readers, that short interval might very easily upset the little arrangement most completely. Who that has kept bees for any time does not realise that he may find it necessary to open the entrances to his hives one morning to allow the crowds of busy workers room to get in, while honey is being stored so fast that full supers are almost within arm's length, yet a couple of days later finds him reducing entrances to keep the biting cold winds from chilling the brood, and maybe for a week or ten days following hardly a bee is seen out-doors.

This is where the remarks made up beforehand might by the irony of the bee-keeper's fate be made to look almost ridiculous in print, and this is what makes the cautious editor look up and around very carefully ere he even ventures to predict what it may be useful to do or to leave undone in bee work.

Again, an arrangement of "work for the week" might possibly be made to suit a local paper circulating in, say, a hundred-mile radius, but the B.J. has readers reaching from "John-o'-Groats to Land's End," and the point would be to say which place must the "work" be dated from? It is not enough to add "Northern Counties may be a week later." As a matter of fact, reports which appear in our pages of queens crowded out of brood-combs through the latter being clogged with newly-gathered honey the first week in April read very like "romancing" to bee-keepers in some parts, where we have accounts of stocks perishing from starvation a fortnight

later on in spring. These variations—wide as the poles apart—should show to those who judge only from the outside—or from their own bee-stands—how very difficult it is to meet even this one item of the "improvements" in journalism, which seem so easy of accomplishment to those unable to see from the *inside* as editors are compelled to see.

We do not believe there is a single pursuit in which more conflicting and opposite individualities, methods, degrees of aptness, and surroundings have to be considered than in that of bee-keeping; and to follow any one person's ideas, or to consider any one district first, would only lead to justifiable irritation all round. This is what renders it necessary that editors and readers alike should bear with the continued reiteration of the most elementary inquiries which reach us; not the least trying part *to us* being the frequency with which we are asked to reply to queries and render assistance where a little trouble by way of reference to former issues would save trouble to all concerned.

The post of editor of a journal where personal correspondence enters so largely into the duties as ours is not generally regarded as a bed of roses, and, while we endeavour ungrudgingly, we hope, to do all we can in assisting those who apply for help we must be allowed to take a very wide view in judging of what is best for the greatest number.

ROYAL AGRICULTURAL SHOW.

We would remind our readers that entries for hives, honey, &c., at this exhibition close on May 1. The exhibition is to be held at Cambridge, commencing on June 25, being one week later than the time fixed during the last few years. The fact of the show being held somewhat later than usual coupled with the probability of an early honey harvest, should produce a much better display of honey at this year's exhibition. The schedule provides for the return of the entrance fees in those cases where the exhibitor is unable to send his honey, owing to unfavourable weather for honey gathering having prevailed. Taking all these favourable conditions into consideration, we hope that a very large entry will be made.

The locality of the exhibition is very central, and we anticipate that good results will accrue to the exhibitors of appliances who stage their goods. We hope to see a good competition in the appliance classes.

LANCASHIRE AND CHESHIRE B.K.A.

We are requested to invite the attention of bee-keepers in the counties of Lancashire and Cheshire to the competition for a prize of a "Wells" hive, offered by Mr. Rose, of Liverpool, for the best-managed apiary of not less than three hives. No entrance fee is charged, but intending competitors must send in a written notice to the hon. sec., Dr. Jones, Treckleton, near Preston, by May 1, who will furnish all particulars required.

LEICESTERSHIRE BEE-KEEPERS' ASSOCIATION.

The twelfth annual meeting of the Leicestershire Bee-keepers' Association was held at the Mayor's Parlour, Old Town Hall, on Saturday, April 14. The Mayor (Alderman Hart) presided, and there was a large attendance, including Alderman Underwood, Dr. and Mrs. Fulshaw, Rev. T. C. Deeming, Miss Throsby, Messrs. W. P. Meadows, J. S. Shenton, T. Carter, Fewkes, T. B. Widdowson, Cummings, Martin, Perkins, C. Foxon, J. Waterfield, J. Waterfield, jun., A. Silcock, G. Munday, J. Cooper, Black, Henry, and H. M. Riley Speaking with regard to the objects of the Association, the Chairman said the habits of the bee had been a matter of interest from the earliest ages, and an association of that kind, having for its object the promotion of the cultivation of the bee for purposes that gave so much pleasure and comfort to humanity, should be heartily supported. He congratulated the committee on the precaution they had taken for the protection of those who were interested in honey producing.

Among other matters referred to in the annual report, it was stated that the summer of 1893 was a glorious one for the busy bee, and the honey yield was equal, if not superior, to any previous season.

The annual shows, held in connection with the County Agricultural Society, and Abbey Park Flower Show were also mentioned as having been most successful. No further grant had been received from the County Council, but the committee were now in communication with the County Council committee on the subject, and hoped to be able to get a sufficient grant to enable them to engage a man permanently during the summer to visit all the villages in the county, and to show in a simple and practical manner how bees may be profitably and successfully kept. The increased and better fruit obtained as the result of keeping bees has tended to a greater interest being shown in the matter throughout the country.

After stating that steps had been taken to assist members in disposing of their honey, by providing attractive labels for jars and sections, and that a beginning had been made in arranging for duly authorised agencies for the sale thereof throughout the county, the report concluded with an expression of regret at the resignation of the hon. secretary, Mr.

Riley, who had, however, consented to act as financial secretary and treasurer.

The financial statement showed a balance in hand of £6. 5s. 1d., after the year's expenses had been paid.

The report and balance-sheet having been adopted, Mr. W. J. Martin, of Cossington, was elected secretary, in succession to Mr. Riley.

The committee was re-elected, with the addition of Messrs. Waterfield, jun. (Kibworth), Dr. Emmerson, and Dr. Fulshaw.

At the conclusion of the general business, Mr. Meadows delivered an address on "The Successful Handling and Marketing of Honey, with General Hints on Bee-keeping," which was listened to with much attention, and at its conclusion the lecturer was, on the motion of the chairman, heartily thanked for his interesting address. A vote of thanks to the Mayor for presiding terminated the proceedings.

IRISH BEE-KEEPERS' ASSOCIATION.

The annual general meeting of this association was held on the 19th inst. The chair was taken first by Miss Rutherfoord, afterwards by Mr. Monaghan. The report, which was adopted, first records the important assistance obtained from the Congested Districts Board and Commissioners of National Education, an account of which has already appeared in the BEE JOURNAL. It then gives a summary of what the association has accomplished by itself during the year, which includes visits by experts to apiaries, lectures, assistance given to bee-keepers for the prevention and cure of foul brood, and sale of members' honey both in Dublin and at Cork. In Dublin, where honey is sold wholesale, and only 5 per cent. commission charged, 2,350 sections were sold at an average of more than 8¼d.; 391 lb. run honey at 6d., 2 lb. at 5d.; and 2 skeps of honey for 13s. These prices may be considered satisfactory when it is remembered that all genuine honey, however inferior in quality, is accepted. At Cork, where the sale is retail as far as practicable, and the commission 15 per cent., 627 sections were sold at 10d., and twelve at 6d. (Run honey is not accepted at the Cork depot.) Mr. Chenevix and Mr. Read were re-elected hon. secs., Mr. Read having undertaken to act when Mr. Chenevix is absent from Dublin, which will probably be the case during the month of June, at any rate. The other officers also were re-elected, and, in addition, the Countess of Aberdeen, who has become a life member, was elected one of the vice-presidents.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of March, 1894, was £1,452. From a return furnished by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see 1st page of Advertisements*).

NOTES BY THE WAY.

[1826.] We have had a break in the fine weather, and the "prophets" who predicted a drier, hotter summer than last are mistaken in at least one of their points. During the past week it has been real April weather, sunshine and showers. The rain has freshened up the fields and woods wonderfully, and farmers are hoping to secure a better crop of hay and spring corn than they did a fortnight ago, when the weather seemed very like the spring of '93. The seasonable weather has also raised the hopes of bee-keepers; it will increase the chances of a better flow of honey. Strong luxuriant plants are better calculated to yield a good crop of honey than parched diminutive ones, other conditions being equal during a honey flow. I never remember a greater promise of bloom on the whitethorn (may), the sycamores, and the chestnuts. The two latter will be in bloom in about a week, while the "may" will follow in a short time, especially in sheltered positions. The seed fields of turnip, swedes, &c., are now in full bloom, and I have no doubt apiaries situated near them will secure a good return of early honey if bees are in a condition to take advantage of the bloom.

I never remember my bees in better condition at this period of the year; brood in eight frames out of nine or ten, as the case may be, some frames nearly full from bottom to top. My spring examination dates on registers from April 18 to 21, only the casual peep before this to see that stores were holding out, and this, I believe, is nearly the latest date of overhauling; but, as stated in a previous note, I attribute the condition to earlier preparation for winter, a good supply of food and young queens, and the let alone principle in early spring. The fussy, inquisitive novice is rarely a success in any pursuit, and especially is this the case in bee-keeping.

Another item that militates against success is re-queening late in the fall by inexperienced hands, often getting queens cheap from those who have them to spare from driven bees.

These queens are of no particular age, probably two or three years old, queens that have had their day, and are past their prime, and the following year the purchasers who have invested in them find their stocks dwindling in the following spring instead of progressing. Ofttimes queens that are fairly good and may possibly grow into good, prolific ones the next year are deposed to make room for a successor of less value intrinsically. This may raise the question, "Is it good policy to re-queen, or let the bees re-queen at will?" To such question I would reply, re-queen, certainly, but do it judiciously and with discrimination. If you have a good strain of bees select your queens from the best of your stocks noted for gentleness, industry, prolificness, and—if you work for comb honey—good "cappers." There is a great difference in the quality of work done by bees in regard to the finish of the product. When working for comb honey, if I run my apiary for extracted honey I should breed for bees that totted up the largest lump or pot of honey. I do that now, other conditions being equal in the production, but beauty of comb and finish in capping or sealing is lost in the extracting room. Then, if you have not got a good strain, buy your queens from a reliable dealer, who has probably spent years in breeding up a good strain by careful selection—men whose reputation is at stake in the transaction—and you will get queens of reputed worth, queens of a definite age, queens reared under the best possible conditions to secure a large army of workers ready for the harvest.

Messrs. Abbott Bros. sent me a sample dozen of their broad-shouldered frames made to the width of top-bars and ends I suggested a fortnight ago. I am pleased with the alteration, and have no doubt that in the near future the wider top-bar, with a 1⅜ in. end, will be the adopted standard width. I have noticed that in overhauling my hives during the past week, the narrower frames contain the combs best adapted for interchangeability, and when practical bee-keepers have given the 1⅜ in. spacing a trial, the advantages will be patent to each one. The frames, as altered, are stronger, better able to sustain the weight of tiered supers, and the closer spacing will help to crowd the bees into the supers, while the wider top-bar reduces the bee space to the prevention of brace or burr-combs, thus effecting a saving of useless bee work, and also time (and sometimes the temper) of the bee-keeper when removing the supers from the hives and storing them away. Then the contracted space between the top-bars will help to prevent the queen from going up into the supers, and where working for section honey reduce the expenses, as excluder zinc will not be required.—W. Woodley, *Beedon, Newbury.*

Errata.—For "mint flower" in par. 1 (1810, p. 144), read wint, or wind flower.

THE "BRITISH BEE JOURNAL" AND EUCALYPTUS HONEY.

[1827.] As you have inserted a rather strong personal article in B.B.J. of November 30, 1893, doubtless you will permit me to reply to it. "The Heathen" in the same number says "he is old enough to know better than to indulge in personalities." I also have always thought "personalities" a mistake; abuse and bluster never strengthen a case. If eucalyptus honey cannot be written about without losing one's temper or throwing mud at each other, it had better be left alone altogether.

When you assert in your article that I am "neither just nor accurate," one naturally thinks you ought surely to take especial pains to be accurate yourself. I fail to see now the slightest inaccuracy in my quotation you refer to. But let me point out what a very misleading idea you impress on your readers respecting the same by inadvertently or carelessly—I will not say intentionally—*omitting the date* on which the letter was written that you complain of. Briefly, you build up the case against me in this wise: On October 5 and 12 certain letters of mine, with comments of yours, appeared in the B.B. Journal; that I, *after* having thus had full opportunity for expressing my views, &c., adopted unfair methods by carrying the controversy into other channels, &c.—to wit, the columns of a newspaper, on October 23. Now, why did you not say that the date that letter was written, as stated in the newspaper cutting before you, was August 27?—five to six weeks *before*, not *after*, the letters appeared in your October issues. Moreover, I did not see your October numbers till December—more than three months *after* my letter was written to the newspaper.

In view of these facts, what becomes of the agony you pile up in your article? As for the article I wrote, I see nothing wrong about it; neither can I understand why I should be debarred from writing to any other paper simply because I wrote a letter to B.B. Journal, seeing that for years I have been in the habit of writing both for newspapers and journals on both sides of the world.

Now, respecting the tirade against myself. It does me no harm—and if it amuses you, or entertains your readers, it may even do some good. I do not, however, as you seem to think, care a red cent about publicity. Had I written under a *nom de plume* people might have said, here is a man firing from behind a hedge, so whenever I write "more forcibly than polite," I always sign my name in full. You need not print it unless you like—especially as you seem so to grudge the "free advertisement"—else why refer to it three times in your leader. Don't regret it, friend, I trust the recording angel will put that "free ad." down to your credit as one of the good actions done without hope of reward.

Let me, however, assure you that I cannot

possibly derive any benefit from that free adv., because I have no eucalyptus honey to ship this season at all, and I have hitherto had more orders for it than I could supply. When our production gets ahead of our demand, then I may probably see the desirableness of advertising in your esteemed journal, and I shall not then ask you to insert it gratis. In support of my statement allow me to point out that the name of our agent has never yet been published, so where does the value of the free advertisement come in.

Controversial matters, like this about eucalyptus honey, sometimes serve to enliven the pages of a publication and furnish the oft-tired-out editor with a new theme to manipulate; therefore the gain, whichever way you look at it, should in this case accrue to the Editors of B.B. JOURNAL.

Respecting eucalyptus honey, I have nothing whatever to withdraw from what I have written; if anything, I can only emphasise it by saying that, whenever any one discovers a great fact or truism, he can afford to advocate and hold on to it, whilst the world at first laughs and sneers, and then ultimately turns round to his view of the subject.

The main point I wished to impress on our English friends (in contradistinction to your opinion) was that if any Australasian honey was unfit for table use, the eucalyptus tree was not to blame for it, and you must look for some other cause.

You write somewhat sarcastically about the wonderful honey produced at our apiary. You are, however, quite right. It is wonderful, and, as you seem to challenge the fact, I will tell you something more. I have never yet seen a sample of honey equal to it in all points outside this district, and I do not think there is any better produced in any part of Australasia.

Mr. Grimshaw appears to be the only person who, without prejudice, has approached this subject with a desire to thoroughly investigate it, without regard to anybody's preconceived opinions. Hence he has ventilated a most important point—the difference between oil or extract distilled from the blossom of trees or flowers, and that obtained from the leaves. Be good enough to refer to his letter—then look at the matter in this light. Genuine eucalyptus honey is gathered by the bees from the blossom of the gum trees.

Bogus E. honey is any kind of honey you please flavoured with oil or extract obtained from the leaves. Nine-tenths of the eucalyptus oil is obtained from the leaves of the E. Amygdalina, and not from the E. Globulus, as is generally supposed. The percentage of oil in the leaves of each of the above is—E. Amygdalina, 3·313, and E. Globulus, only ·719. The cost of obtaining the oil from the blossom would be enormous, as the trees would have to be destroyed, it being a sheer impossibility to gather the blossom from trees averaging 200 ft. in height. Excuse bothering you and trespassing so much on your time and space, and thanking you in anticipation of your courtesy to insert this.—JOHN SMITH, *Montrose Park Apiary, Mount Cotton, near Brisbane, Queensland, February* 27, 1894.

[We print the above communication *verbatim et literatim*, and purposely refrain from adding a word of comment on it. We say "purposely" because of our desire to avoid even the risk of further "reply" to whatever we might feel it incumbent on us to say regarding the statements of our correspondent. All that has been done or said in the matter by the Editors of this Journal is recorded in print; they are perfectly content to be judged thereby, and think the controversy should now cease. Readers, however, for whom the subject possesses interest may refer to back numbers of the B. J. for the way in which—to quote Mr. Smith—"You build up the case against me."

The numbers referred to are those for September 21, October 5 and 12, and November 30, 1893. And that there may be no suspicion of avoiding publicity on our part, they will be sent free to any one requiring them on receipt of stamps to defray cost of postage.—EDS.]

A VISIT TO "BEE MOUNT."

[1828.] Feeling inclined to roam, and the day being all that could be desired from a bee-keeper's point of view, I started from home not knowing where my roving would lead me to; but finding myself in the parish of Stoke Prior, it occurred to me that Mr. Percy Leigh resides somewhere in this parish—which, by the way, is one of the largest in England—and I determined, if possible, to find out Mr. Leigh and Bee Mount. After several inquiries, and a long, but pleasant, walk, I at length found myself near the parish church, and the residence of Mr. Leigh was pointed out to me; and a splendid place it is, too, for bees, surrounded with thousands of fruit trees, including apple, pear, plum, and cherry, in full bloom, and making a picture of loveliness, together with acres of gooseberry bushes and raspberry canes, and an acre or more of strawberries—just the place to cheer the heart of a bee-keeper. I had not gone far before being made aware that an apiary was near at hand by the hum of the busy bees on all sides. I stood several times and watched them flitting from flower to flower; it reminded me of swarming time, so loud was the hum and so thickly were the trees laden with bees. At length I arrived at the wicket leading into the garden, and a very nice sight here met my gaze. Nicely-painted bar-framed hives taking up one side of the garden, the other given over to bees in skips. Seated on a rustic seat in the shade of an old yew-tree I found the genial owner of these hives, to whom I introduced myself, and was

invited to have a look through his hives with him. Mr. Leigh is proud of his bees, and rightly, too, for all have wintered well and are now strong. In looking through them we found brood and newly-stored honey. We now made our way to the old yew-tree, seated beneath which we smoked the pipe of peace, and talked bees and their doings. I cannot forget how quiet and peaceful the country seemed, so different from a busy town life. No wonder town-bred people strive to get into the country for a few hours when everything in nature is looking grand. During the conversation with my friend—for I now look upon him as a friend—Mrs. Leigh appeared, and after being introduced, she very kindly invited me to tea, an invitation I readily accepted. I found she was as deeply interested in the bees as her husband, in fact, I learnt she had one stock in her own right. On entering the house, among the first things to catch the eye were several nicely-bound volumes of the BRITISH BEE JOURNAL. I found Mr. Leigh had designed a very nice hive, referred to in B.B.J. for February, 1893 (p. 46), he believes it will turn out well. It consists of a double-walled brood-chamber containing thirteen frames, the ninth having fixed on it a piece of queen-excluder zinc, confining the queen to the front of the hive, leaving four at the back for honey; then another body-box, 10 inches deep, fits on top of brood-chamber into which is fitted a second chamber with twelve standard frames; the body-box and roof allowing ample room for a crate of sections. I have not seen a more nicely arranged apiary than that at Bee Mount, the owner of which has lately been appointed local secretary to the Worcestershire B.K.A., and if the Association does not extend its numbers I shall be surprised. Mr. Leigh has done much to assist bee-keeping, such as organising bee lectures, &c, his last work being to persuade the local flower show committee, of which he is a member, to give prizes for displays of honey at the forthcoming show, and at which he is trying to get the Worcestershire bee tent. Now, as all things have an end, so must my visit to Bee Mount, and, after spending a pleasant afternoon with Mr. Leigh and his good wife, with a hearty shake of the hand and an invitation to call again, I took my departure homewards, convinced that my friend is striving to leave the world a little better than he found it.—WILFRED HARDIE, *Bromsgrove, April* 11.

"BALLED" QUEENS

AND UNTIMELY MANIPULATIONS.

[1829.] No doubt I am a very unobservant person, but I have kept bees for exactly ten years, and have never had (so far as I know) a case of a "balled" queen. Yet I do not let my hives alone. I have ten now, all strong and well, but what have they had to go through this spring? Every lot has been moved out of its old hive into a clean and freshly-painted one. I started this little job on February 28, and ended on April 9. Each hive has been opened up on an average three times this year; they have been stimulated with uncapped honey, put into the middle of the brood nests, and the weaker lots strengthened with combs of sealed brood from the stronger; yet for all this handling no queen has been "balled" so far as I know, and I had interviews to-day with nine of the queens, the tenth hive being left unopened. I am not over gentle; I jar a frame sometimes. Now, why under such provocation have I not had the pleasure (!) of seeing the "hissing mass, about the size of a walnut," which betokens a "balled" queen? R. S. R., *Stockbridge, Hants, April* 17.

[Notwithstanding our correspondent's endeavour to make clear the fact that he is not a good bee-manipulator, we maintain the contrary, even if he does chance to be "not over-gentle" in his handling. Moreover, he is extremely lucky—and we congratulate him accordingly—in not having seen a "balled" queen during his ten years' experience. May he be ten more ere he does, say we. But, while thinking sorrowfully of the number of less fortunate ones who write us relative to their mishaps in this line, we leaned back in our editorial chair, and, with a sigh, reflected on the relief it would be to our right hand if all readers of the B.J. were as free from (bee) faults as the writer of the above—that is, supposing him to be ordinarily observant while operating. But, alas! who is quite perfect among us? And we must confess to a sort of half-fear that there is some justification of our esteemed correspondent's charge against himself of being an "unobservant person," seeing that the envelope containing his communication was handed to us with the remark, "Unstamped; tuppence to pay, sir!" Seriously, though, it must be taken as one of the curiosities of our craft that some bee-keepers have as many odd, out-of-the-way experiences—some disastrous, some almost comical—in one year as others have in twenty; but there is no doubt whatever that the number of cases coming to our knowledge each year more than justify all that was said on the subject in our issue of the 12th inst.—EDS.]

OPENING HIVES TOO EARLY.

[1830.] I am obliged for the reply you give me on p. 152 of this week's BEE JOURNAL, and am very pleased to say I have no brood-comb to send for your inspection. To-day I took the frame containing it (the brood), and after examination, found only three or four dead brood—the whole of the remainder had hatched out—so I placed it in another hive, after removing the dead brood. The dwindling stock is in much the same state as mentioned in my former letter. I am thinking of restocking the hive with the first swarm that comes off flies. Is there any other course you can suggest? [Not if combs are

free from disease.—Eds.] As I mentioned, I have had very little experience, but I am much inclined to think that a large proportion of failures are the result of too early opening the hives, when the weather is too cold and the brood, &c., gets chilled, specially in the case of young beginners, who, very naturally, are slow in movement, I mean nervous and fussy.—W. H. M., *Glastonbury, April* 20.

DEALING WITH FOUL BROOD.

[1831.] I thank you for reply to my query on page 150 of B.J. for the 12th inst., and send by this post a piece of comb, as suggested, for your inspection, which I think contains foul brood, and with which I feel certain you will agree.

During the twelve years I have kept bees, this is the second time the disease has appeared in my apiary. On the first occasion I tried both Mr. Cheshire's phenol and the salicylic acid treatments as given in the "Guide Book," but without effect. It began to spread to other hives, and when four were attacked I removed the remaining unaffected hives to another farm some miles away. The four affected stocks, in spite of my efforts, got worse, and eventually died out. I have not had any sign of its reappearance until this second occasion, which happened this spring, when I found it had broken out in a very strong colony. I immediately removed it to another farm, and none of my other hives have any sign of disease. I shall be pleased to try anything you may recommend, in order, if possible, to effect a cure. I may add that I have always fed my bees with syrup prepared according to the "Guide Book," with a solution of salicylic acid.

I also send specimens of bees, and should like to know to what species they belong. With regard to "hooking out dead brood" in the article referred to in my last (page 132, B.B.J.), I understood that the bees would fill the cells with honey in which brood has died, and traces still remain, and so continuing the disease indefinitely. I therefore thought unless the dead brood was cleared out completely it would be impossible to exterminate the disease.—F. B. Booth.

[After careful examination of comb sent we found only one cell in which any trace of foul brood could be seen. The rest was "chilled brood," and as such would form a dangerously favourable media for the propagation of the disease if left in the hive. We advise removal of all combs containing dead brood, and the substitution of frames fitted with full sheets of foundation; feeding with medicated syrup, and, in addition, placing a few pieces of naphthaline on the floor-board of the infected hive—indeed, of all hives—to prevent the further spread of the disease. The bees sent show slight traces of the foreign element, but not more than is found in many apiaries where no pains have been taken to introduce it.—Eds.]

Queries and Replies.

[1011.] *Preventing Swarming.*—1. How can I prevent my bees swarming? They are a strong stock in a straw skep, and I wish to transfer them to a frame hive. 2. I saw two or three drones at the entrance of the hive the other day, and when I pulled two pieces of wood out of entrance to enlarge it, I saw some small maggots; will they do any harm to the bees?—A Beginner, *Cambridge.*

Reply.—1. The most effective way of preventing swarming in your case will be to prepare the hive as advised in B.J. for February 8 last (p. 58), and let the bees transfer themselves. 2. The "maggots" would be the larvæ of the wax moth. So long as the stock is strong, they can do little harm to the bees.

[1012.] *Bees Casting out Immature Brood.*—1. Do bees get honey from the beech tree? as we have a lot of these trees close to us, and the bees are very busy in them. In one of my skeps the bees are casting outside grubs, one I noticed was a drone almost full grown. What is the cause, I think they have plenty of food and are very strong.—J. E. R., *Berkhampstead, April* 23.

Reply.—1. Yes. 2. The casting out of brood is caused usually by an adverse change in weather and consequent stoppage of income. The mischief will cease when honey begins to come in again. If food is not plentiful in the hive the bees should be fed.

[1013.] *Suspected Foul Brood.* — I have forwarded to you a piece of comb which I think is affected with foul brood. The bees in the hive it came from were fairly busy until a few weeks ago, when they all died off, leaving about 7 lb. of food. If you would kindly give your opinion of the comb, and say if it is diseased, also what is the best thing to do with hive and the combs, then I can show it to my friends to whom it belongs.—E. Sims, *Smeeth, Kent.*

Reply. — The brood in comb sent is "chilled," not foul. We can only account for death of bees by supposing it to be from cold and lack of vitality through paucity of numbers. Perhaps the bees have died of starvation at one side of the hive while the food was at the opposite side; but, of course, only an examination will clear up these points. As it might also reveal signs of disease in other portions of the combs, so we should advise melting the latter down before using the hive again.

[1014.] *Best Way to Find Queens.*—Can you tell me:—1. What is the address of the secretary of the Hants and I. W. B. K. Association? 2. Are the "American cloth" quilts placed *above* the ordinary calico quilt, and which side

downward towards the bees—the glazed smooth side or the other? 3. What is the best way I can gain information as to finding the "queen" bee? I have often examined the frames, but could never "spot" the queen. —ASPIRANT, *Lymington, April* 19.

REPLY.—1. Mr. E. H. Bellairs, Wingfield, Christchurch. 2. Glazed side down. 3. By getting some experienced bee-keeper to point out the queen on a comb and explain the general indication of her presence while he has the hive open before you. It is next to impossible to convey the information in print.

[1015.] *Moth-Infested Combs.*— I have many frames of empty combs which I intended to use this season, but find they are infested with the wax moth. Would it be safe to use them? —B. H., *Launceston, April* 19.

REPLY.—If the combs are badly infested, having the septum or "midrib" of the comb bored through and partly eaten away, they will be of little use to the bees, and should be melted down for wax. If, on the other hand, the damage is trifling, the larvæ and the passages they have formed may be picked out with the help of a pin, and the bees will repair the combs. It is a pity to have good combs destroyed by the moth larvæ when so simple a remedy as a few pieces of naphthaline will protect them from their ravages.

[1016.] *Suspected Combs and Uniting Bees.*— 1. Is the comb enclosed infected with foul brood? The stock from which I took it is very weak —barely covering four frames. This is the only comb in which the brood has failed to hatch out. Will this stock do any good if stimulated?—or had I better unite with another stock? 2. What is the breed of the enclosed bees marked 1 and 2? They both came from the same hive. The ones with the golden band appear to be increasing more rapidly than the others.—CASTEL CANE, *East Dulwich.*

REPLY.—1. There are slight traces of foul brood in one or two cells, but the bulk of the dead brood is simply "chilled" owing to insufficiency of bees to maintain the heat necessary for its development. If the bees are crowded up on so many frames as they cover, wrapped warmly, and fed on medicated syrup—given warm—the further progress of the disease may be checked, and if brood is hatching out, as stated, the stock may be built up to fair strength by the time the honey harvest proper begins. On no account, however, should the bees be united to another stock. 2. The queen is evidently crossed with a Ligurian or a hybrid drone.

[1017.] *Bees Perishing for Want.*—A neighbour of ours had a skep of bees which appeared very strong, hanging out as if ready to swarm, about three weeks since. Last week he found them all dead. He says they had plenty of food. I am sending a few bees and a piece of the comb. Can you kindly tell me the cause? —S. M. HARDY, *Aldbrough, Hull, April* 19.

REPLY.—Notwithstanding the owner's assertion as to "plenty of food," the indications point very clearly to hunger as the cause of death. Comb quite dry, dead bees in cells head-foremost, brood almost mature with cappings eaten through, all tell their own tale, and—judging by sample of comb sent—your friend may take it from us that he has lost his bees for lack of a little timely feeding.

Echoes from the Hives.

Kingston-on-Thames, April 10. — Not hearing an echo from this district lately, I send one; and, to put it fairly, I think one's failings as well as successes should be chronicled. Bees here have wintered well, and are now strong in numbers, with a splendid show of brood, which augurs well for the coming season. There have been one or two losses, however, during the week of extreme cold, some time ago, when the thermometer registered 22 to 26 deg. of frost. At this time weak lots succumbed, even with plenty of stores. I regret to say this was particularly the case with my own bees, for two stocks, headed by young queens, died, all having plenty of honey at the sides of the combs, but all had been cleared in the middle. Then, as if that was not disappointment enough, two lots have since decamped, one, I fear, through starvation, the other deserted from a skep. The last-named were in the skep on Good Friday certain, and ten days later there was not a live bee in the hive, and only two dead ones, the skep being firmly fixed down on the floor-board. On raising it I found quite three or four slabs of honey sealed over in comb. This skep was placed about 3 yards away from a fowl-house, but which is kept scrupulously clean. Could there be any unpleasant smell that was distasteful to the bees? I have only one weak lot left now, and these are queenless and dwindling. Have since removed them several yards away, 1 ft. every two days. As my stock is now reduced so low, I should be glad to purchase a swarm, if any reader has one to sell cheap.—H. C.

[We cannot attribute the flight of the bees to the proximity of the fowl-house; there must be some other reason not apparent on the surface.—EDS.]

Beemount, Stoke Prior, Worcestershire, April 17.—Sorry to say I found a few drone grubs cast out of one of my hives yesterday to which I had added three extra combs last week. This morning I found at the entrance of another hive five dead fully developed drones—a sure indication that little or no honey is being stored. The weather here has

been cold, wet, and far from favourable lately for bees—in fact, on some days hardly a bee has been visible, so very different to a week or so ago. The pear, plum, and gooseberry bloom is now over, and, although apple and currant blossom is fairly plentiful, bees are unable to take advantage of it.—PERCY LEIGH.

Somersham, Hunts, April 19.—Bees very strong. I have some already working in shallow frames and sections, but the last few days no surplus has been gathered, as the nights are very cold. I am afraid we shall hear of many cases of "chilled brood" in our district, the fruit-bloom, which has been so plentiful, having caused queens to lay in every available cell. I have several stocks with seven and eight sheets of brood, but not in single-walled hives. All my strongest hives are on the "W. B. C." principle—*i.e.*, body box with outer case, and three inches of chaff all round, and chaff cushion on top. I have put feeders on the hives that are not supered, with about a pint of warm syrup just to keep things going. Eleven o'clock p.m.—just been out, and find two degrees of frost. Bad look-out for us poor fruit-growers! But *nil desperandum*.—R. BROWN.

The Paddocks, Smeeth, Kent, April 17.—I had a very strong swarm from a straw hive on the 11th inst.—W. M. ALLFREY.

TRADE CATALOGUES RECEIVED.

Abbott Bros., Southall, and High Holborn, London, W.C.—This full and well-got-up catalogue of forty pages has been thoroughly revised, altered, and rearranged for the present year, not the least important changes being the reduction in price of many of their well-known hives and bee goods. Messrs. Abbott include quite a number of articles not found in other catalogues, and have made every effort to keep their list abreast of the times.

T. Lanaway & Sons, Station-road, Redhill, 16 pp.—Messrs. Lanaway illustrate five patterns of hives in their list to suit various tastes and pockets, along with particulars of all needful requirements.

H. Hutchings, St. Mary Cray, Kent.—This is another small, but compact, list of bee goods, some of which appear unusually low in price.

Bee Shows to Come.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries close May 31. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries close May 1. Post entries at double fees till May 12. Secretary, John Huckle, B.B.K.A., King's Langley.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

REPLYING to the inquiry in last week's B.J. as to where bee appliances can be had in Sheffield, a correspondent writes:—"The nearest reliable dealer to Sheffield is Mr. W. Handby, Hasland, Chesterfield."

EDWIN GRIFFIN (Upton-on-Severn).—*Dividing a Strong Stock of Italian Bees.*—We should not advise dividing the stock in the manner proposed. Instead of doing so, wait until settled warm weather may be safely counted on, and honey is being gathered freely. Then, in the middle of a fine day—when bees are working well—lift out a comb on which the queen is found, and place it in the centre of a new hive, already prepared with frames fitted with full sheets of foundation. Cover up warmly, and place it on the stand where the Italian stock stood, and move the latter to a new location some distance away, first closing up the frames and inserting a frame at side to replace the one removed. As to your dividing the "English stock" in the same way and giving an Italian queen, if you would not spoil the chances of a harvest in 1894 we should recommend limiting, dividing, and breaking up stocks to the one referred to for this year at least. A good guide-book on bee management would also be very helpful to one somewhat inexperienced, as the letter received leads us to suppose you are.

J. J. W. R.—*Frames for Extracting*—1. It is of no consequence whether frames for extracting are fixed at right angles or parallel to entrance. 2. The pollen pellets have probably got dislodged from the bees' legs when crowding into the hive during the busy gathering time. It will not have been thrown out. No notice need be taken of it

G. MCGREGOR (Croftamie).—*Bee Flowers.*—So far as can be judged from the flattened sprig of bloom received we think it is the maple. If correspondents would send fresh specimens of blooms packed in a box and stuck into a piece of potato, they keep fresh for several days, and are much more easily recognisable.

J. THOMSON.—*Brood Cast Out.*—If the bees have a pint of warm syrup given them, the trouble complained of will probably cease in course of a day or two.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

WANTED, intelligent LAD, with some knowledge of gardening. Age about 15. Must be willing and obliging, and of good character. Board, lodging, and small wage first year. BADCOCK'S FLORAL DEPOT Bexhill-on-Sea. D 65

50 1-LB. bottles pure extracted ENGLISH HONEY. What offers. ERNEST DAVIS, Great Bookham, Surrey. D 66

FOR SALE, empty FRAME-HIVES. Some new. WRIGHT, Penkhull-terrace, Stoke-on-Trent. D 67

WANTED, two FRAME-HIVES (on legs preferred), complete. Stocked with Carniolans. Delivered free at address below. State price for immediate delivery. THOMSON, 1, Hampstead-road, Preston Park, Brighton. D 69

BEES (Carniolans) FOR SALE. Swarms (including skep) 22s. each. Ready early in May. Order early. C. MORREY, Five Ways, Neston, Chester. D 68

WANTED, EMPLOYMENT in Apiary by YOUNG MAN. Used to bees and appliance making. Seven years in trade. T. EARL, Lowfield Apiary, Crawley, Sussex. D 70

PURE HONEY, in tins 15 lbs. each, 6½d. per lb. Sample two stamps. POMERY, Kethem, St. Mawes. D 71

WANTED, SECTIONS of COMB HONEY (any quantity), and HONEY in bulk. State price, &c. Orders also given for coming season. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London. 199

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles post free. T. HOLLIDAY, Astbury, Congleton. 187

STOCKS, NUCLEI, SWARMS, and QUEENS FOR SALE. Address, The Rev. C. BRERETON, Pulborough, Sussex. 192

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PURE, Prime Swarms of my Selected Strain of English Bees, all 1893 Queens, Packing-box, and put on Rail free, price 15s. Address, W. WOODLEY, World's End, Newbury.

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Yes! if you want Honey. Now is the time to learn "How to prevent Swarming" in bar-frame hives, and to "Transfer Stocks from Skeps to Frame-hives." Every bee-keeper should also know "How to make an artificial Swarm" successfully. All these &c., 3d. only.

DON'T DELAY.

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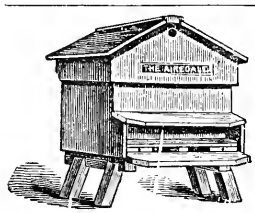

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I am very careful to have only well-seasoned wood used, and solicit a trial.

ILLUSTRATED CATALOGUES FREE.

SPECIAL NOTICE TO IRISH BEE-KEEPERS.

Mr. KIRWAN'S Article has caused him to receive a great number of letters asking who makes the special Sections that he has been so successful with.

They are the PATENT GROOVED SECTIONS made by Thomas B. Blow, Welwyn, Herts.

Illustrated Catalogue giving full details of these Sections will be sent gratis and post free on application.

COMB HONEY IN SECTIONS.

During the past winter I have purchased between two and three tons of the above. It has been bought indiscriminately from the Bee-Keepers of Great Britain and Ireland. I hope to require five tons during the coming autumn and winter, and shall purchase by preference from those Bee-Keepers, who are among my customers for appliances. Special arrangements can be made to take the whole Comb Honey product of large apiaries, and special prices can be given for the Honey where part payment is taken in appliances. Spring crates are lent free to insure safe transit by rail. Any quantity of English Bees-Wax can also be purchased.

THOMAS B. BLOW,

Manufacturer of Bee-Keeping Appliances,

WELWYN, HERTS.

Editorial, Notices, &c.

USEFUL HINTS.

Weather.—After some days of heavy rain, which, however good for agriculture, is against honey-storing, warmth, coupled with dry sunny days, is now much to be desired for the bees. There is still abundant bloom in some orchards, but a good deal of it has wasted its sweetness so far as bees go, the wind having been too cool and the air too moist for the work of honey-gathering.

Results from "Wells" Hives.—This being about the time when plans for the coming season are being matured, we venture to ask those of our readers who possess hives being worked on the "Wells" or double-queen system, to keep a careful account of the results obtained from such hives for publication in our pages in the autumn. It goes without saying how much of interest to members of the bee fraternity such reports would possess, because, while admitting the undoubted success of the plan in Mr. Wells' own hands, there seems to be some doubt as to the advantage it possesses for the ordinary bee-keeper, and we think no one will be no more desirous of putting the plan to this test than its introducer himself.

Swarming and Young Queens.—The signs continue to increase that the year '94 is not going to be a "non-swarmer" like that of '93. Once the season is in full swing, natural swarms are likely to be plentiful, and as old queens are in the majority in many apiaries it will be well to preserve so many young queens as may be needed to replace those which have passed their second year. This should not be difficult where swarms issue in settled warm weather from supered stocks, by following the plan of providing the swarm with a hive furnished with full sheets of foundation, and, after setting it on the old stand, giving all surplus boxes or section racks to the swarm to complete. The brood-combs of the parent stock are then formed into nuclei as may be required, and the queens reared therein will take the place of older ones deposed in autumn.

Disinfecting Hives.—A well-known American bee-keeper, writing to the B. K. Review, referring to a method of disinfecting foul-broody hives, which he states has for several years proved "a grand success," says:—

"Scrape the inside of the hive until most of the bee glue for propolis is removed, then paint the same with kerosene. Place inside a piece of burning paper and let the kerosene burn off, and you have a clean hive, thoroughly disinfected, and no harm done to the outside, whether painted or not. Don't let the fire burn so long as to char the wood, but when slightly charred no special harm is done, as it can be scraped off. One person can thus disinfect fifty hives in a few hours. The fire can be quickly put out by laying a board over the top, or simply by turning the hive over. Try one empty hive, and see how nicely the plan works.

"The first person I know of to discover and put into practice the disinfecting of foul-broody hives by the kerosene and burning plan was George Thompson, Geneva, Ills., who lost his apiary twice by foul-brood. No foul-brood has reappeared in any hive thus treated, and such hives have now been in use in his apiary for several years. The plan is so simple, non-expensive, and effective, there is now no excuse for using such hives not disinfected."

Beginners' Queries.—We should like to impress on beginners the absolute necessity for obtaining a complete work of some kind on the subject before venturing into the modern system of bee-keeping. Such a book is indispensable, and it is no less unsatisfactory to ourselves than to correspondents to be compelled to deal briefly and incompletely with queries which would take columns of reply to be of much service. We endeavour to help readers out of their difficulties, but cannot pretend to teach the whole art of bee-keeping through our query and reply column, as some appear to think; and, although every effort on our part is made to grasp the meaning intended to be conveyed, the details sent are often so vague and incomplete, and leave so much to be imagined, that, as we have said, it is impossible for beginners to get on without a book of

reference which deals fully and in detail with all the more important items of bee-management.

DEATH OF MR. S. CORNEIL,

OF ONTARIO, CANADA.

A very brief notice in current number of the *American Bee Journal*, just to hand, conveys the sad news of the death of Mr. S. Corneil, of Ontario, Canada, which occurred quite suddenly in his garden on March 7 last. Our contemporary had only time to insert a short paragraph announcing the sad event before going to press, further details being promised in next issue.

The deceased gentleman will be remembered by not a few, who, along with ourselves, had the pleasure of making his acquaintance, together with that of Messrs. D. A. Jones and R. McKnight, as the Canadian delegates who visited this country in charge of the fine exhibit of Canadian honey staged at the Colonial Exhibition held in London in 1886.

Mr. Corneil was one of the foremost bee-keepers of Canada, and at the time of his untimely death was secretary of the Ontario Bee-keepers' Association. He was also a frequent contributor to and an able correspondent of the bee journals across the Atlantic, taking an active interest in all that is good in the craft. We sincerely share in the sorrow with which his more immediate friends will lament his terribly sudden end.

WORCESTERSHIRE BEE-KEEPERS' ASSOCIATION.

The annual meeting was held at the Guildhall, Worcester, on Saturday, the 14th ult, when Mr. F. W. Jones presided. There were also present: The Rev. E. Davenport (hon. sec.), Messrs. C. H. Haynes, H. O. Huntley, Mrs. James, Messrs. Thorpe, Neale, F. W. Rollins, Corbett, Bullock, Percy Leigh, and others. Apologies for absence were announced from the Earl of Coventry, the Rev. W. M. Kingsmill, and Mr. Alfred Baldwin, M.P.

The Secretary read the eleventh annual report, in which, among other matters, the committee warmly congratulated the members on the present condition of the affairs of the association. The income kept pace with its needs, the balance was not diminishing, and the membership was larger than last year. With the increased interest that had been awakened in the objects of the association, by means of the lectures and practical demonstrations given during the past year, it was expected that the membership would be still further increased. The committee acknowledged the liberal assistance given by the County Council in their grant of £100. The treasurer's report showed that the total income was £138. 2s. 11d, the balance in favour of the association being £18. 3s. 4½d.

The report and statement of accounts were then approved and adopted. The Right Hon. the Earl of Coventry was re-elected president, and the vice-presidents were re-elected, as was also Mr. George Hogarth, treasurer, and the Rev. E. Davenport, secretary.

The committee were elected as follows:—The Rev. W. M. Kingsmill, Messrs. W. S. Latham, A. H. Martin, Haynes, J. Fehrenbach, Griffin, J. Partridge, P. Leigh, W. E. Woodyatt, and Messrs. A. Baldwin and F. Jones as the representatives appointed by the County Council.

Messrs. Davenport and Haynes were appointed as representatives to the quarterly conference, and Mr. Martin appointed *ex officio* member on the committee of the British Beekeepers' Association.

The Secretary explained that owing to the depressed state of its finances just now, the B.B.K.A. had been compelled to curtail certain of the privileges hitherto accorded to county associations—such as granting silver and bronze medals and certificates at shows, and the sending down of official judges to shows, &c.—unless the affiliation fee paid by county associations were increased.

After some discussion it was resolved to raise the subscription to the Central Association to £2. 2s. per annum.

The question of dividing the county into districts was referred to the committee for consideration of details. It was resolved that the next annual meeting be held at Kidderminster. A vote of thanks was accorded to the chairman.

The draw for hives afterwards took place, the winners being the Rev. E. Davenport and Mr. Woodward.

NORTHUMBERLAND AND DURHAM BEE-KEEPERS' ASSOCIATION.

The annual meeting of this Association was held on Wednesday, April 11, in the Café, Mosley-street, Newcastle, the chair being taken by the Rev. R. E. Taylor. Amongst those present were J. W. Wakinshaw, T. R. Dodd, C.C., J. Darling, R. Brooks, J. Turnbull, and S. Arnott, Newcastle; J. Atkinson and A. Surtees, Gateshead; R. J. Hindmarch and T. Gardiner, Low Till; T. Russell, Wilson Ritson, J. L. Dent, C. Thompson, J. Cuthbertson, W. Pearson, W. Johnson, T. Talbot, and W. Richardson. Several letters were also received from prominent members in several districts regretting their inability to attend.

Whilst partaking of refreshments, the members adverted to the present populous condition of their hives, from which it was generally anticipated that if the favourable weather continued swarms in May would be the rule rather than the exception.

The report showed that sixty new members had joined since its formation in May last, and in congratulating the members upon the

remarkable success of the "Wells" lectures, the committee acknowledged the cordial co-operation of the Northumberland County Council, Mr. C. Williams, acting on their behalf, having taken over the arrangements for three lectures, and contributed a grant of £5 towards the expenses of Mr. Wells' visit. The report also draws attention to the fact that arrangements have been made for voluntary expert assistance to be rendered, and members who desire to be visited are requested to advise the secretary. The financial statement, although showing a slight deficit, was considered satisfactory.

The following officers were elected for the year ending February 28, 1895:—Committee —Messrs. J. G. Angus, J. Darling, County Councillor T. R. Dodd, Wm. Richardson, Wilson Ritson, Councillor F. E. Schofield, and the Rev. R. E. Taylor, and the local correspondents. Hon. Treasurer—Joseph W. Wakinshaw. Hon. Sec.—J. N. Kidd, 1, Havelock-terrace, Gateshead-on-Tyne.

After disposing of the ordinary business, an inspection was made of the apiarian appliances that had been brought together by the members. A very enjoyable evening was brought to a close by a hearty vote of thanks to the chairman.

ESSEX BEE-KEEPERS' ASSOCIATION.

HOW THEY MANAGE A COUNTY SHOW IN ESSEX.

At a meeting of the committee of the Essex Association, held on Saturday, the 21st ult., it was decided to accept the offer of the Essex Agricultural Society to take charge of the honey and hive department at the County Agricultural Show, to be held at Colchester, June 13, 14, as they have done for the past four or five years. The Agricultural Society find the necessary covered shedding and give £10 towards the prizes, the association undertaking all other expenses. Conditional upon receiving a grant similar to that given at Romford last year from the local committee, and adequate support from inhabitants of the neighbourhood in the shape of special prizes, it was decided to issue a schedule based on the same lines as previously, and arrange for demonstrations and lectures in the bee tent. The Essex Bee-keepers' Association are in the unique position on these occasions of getting no gate-money, so that all expenses incurred have to be met by special grants and donations. At Romford last year the local committee made a grant of £20, and liberal donations were made towards the prize list, so that the association were able to hold a big county show, and offer prizes to the value of close upon £30, at a cost to their general fund of only £5. It is intended this year to have an open class for Collection of appliances, with prizes of £3 and £1, in the hope that exhibits will be sent to Colchester on their way to the "Royal" at Cambridge the following week.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see 1st page of Advertisements*).

AN OPEN LETTER TO MR. WELLS.

[1832.] Will Mr. Wells kindly answer the following as regards his double queen stocks?—1. Do you keep them chiefly in hives that only hold seven frames on each side of the dummy, and tier up on top with a box of shallow frames, continuing the dummy up to the top of this first box, thus giving the queens opportunity to extend the brood nest upwards? 2. At the end of the season what do you usually do with these frames of comb? As I take it, there will be a lot of pollen and honey in them, for I presume the brood nest is reduced down to the bottom lot of frames. 3. In the case of swarms issuing from these stocks when you take the combs and brood away to form nuclei, do you return the set of shallow frames next to brood nest? I ask this supposing the queens may have been up there, and that there will be brood in these shallow combs. 4. Do you keep to these fourteen-frame hives entirely, or do you use some holding ten-frames on each side, as several makers are advertising them? 5. When giving surplus chambers—on top of the shallow frames to which the queen has access, and on which excluder is placed—do you tier up with boxes of shallow frames on which the excluder is placed with boxes of shallow frames full length, so as to extend over all the brood frames of both lots of bees? In giving the first lot of shallow frames to extend the brood nest, do you give worked-out combs or sheets of foundation for preference.—JOHN WALTON, *Weston, Leamington.*

MORE LIGHT WANTED.

BEES FIGHTING AMONG THEMSELVES.

[1833.] One of my stocks—headed by a queen raised in 1892, and which last year gave twenty-one partly-filled sections, and wintered well—on April 14 commenced fighting among themselves, attacking bees returning to the hive laden, and causing great destruction among their own community, about a pint of bees being found outside dead. After smoking them, I at last succeeded in restoring quietness, only to find them fighting again on the 21st. I looked for the queen, and found they

were balling her. I released her, but found they still continued fighting. They have plenty of food, sealed grubs, eggs, &c.; but the eggs and brood are in patches on every frame, and all over the place, just as if the queen had been hunted about. Can you, or any of your correspondents, throw any light on this case? I may say the bees had not been tampered with before the first outbreak. Why do they fight, and what can be done to prevent another outbreak? This is no case of robbing, as I have watched them for hours, other stocks working well without excitement. Drones made a fine show of themselves on the 21st inst. My other stocks are doing well.—C. A. B., *Tottenham, April* 23, 1894.

[We should ourselves require "more light" to enable us to safely say what has caused the trouble referred to. There are so many circumstances which may possibly have influenced the result—and of which no outsider can have any knowledge—that at best it would be mere guess-work, possessing little value. Only those who have had a similar experience—which we have not—can throw any useful light on the matter without going into it at more length than our space could afford. We shall be glad to know if the queen has not been again "balled" and killed since she was released on the 21st ult., as we should certainly expect *that* result. In any case it may be expected that the bees will return to decent behaviour now that work is being found for them in the fields.—EDS.]

BEE-PLANTS.

[1834.] Last spring a gentleman offered, through your columns, Canadian balsam plants to any one sending stamps for postage of same. I availed myself of his offer, and received some plants that developed into magnificent specimens.

I shall now be very happy to follow his example, and send any who care to have them seedlings (self-sown), on receipt of stamps to cover postage.—E. H. HOPKINS, *Green Hill, near Bromsgrove.*

OWNERSHIP OF STRAY SWARMS.

[1835.] Will the Editors of the B.B.J. give their opinion on the following? Supposing me to have hived a swarm in the public highway, and putting them on a stand, would not this constitute a claim to the bees? If not, seeing that there are several bee-keepers in the neighbourhood, and having understood that swarms will travel several miles, how am I to know to whom a stray swarm belongs?—A READER OF B.B.J., *Tetsworth, April* 29.

[If a swarm of bees settles on any part of a public highway, and the owner of the hive from whence they came, or some one acting in his behalf, is not present to identify and claim the swarm, the bees are, in the eye of the law, "wild," and as such are claimable by the person who secures them. On the other hand, as has often been set forth in our columns, the owner of a hive from which a swarm is seen to issue can follow and claim them (if not lost sight of while on the wing) wherever they may go; and any person who refuses to give up the swarm, or to allow the owner to take it, may be sued for its value.—EDS.]

WIDE-SHOULDERED FRAMES.

[1836.] I quite concur with Mr. Woodley's suggestion in his notes (1810), that the top bar (or, better still, the whole frame) should be increased in width to 1 in. or $1\frac{1}{16}$ in., with a corresponding diminished width in the shoulders. I have always thought that the $\frac{7}{8}$ in. frames generally were rather too narrow, and in consequence the combs more or less project too far from the frame. I might also suggest one or two other improvements in the wide-shouldered frame—that is, the bottom bar should, I think, be increased in thickness from $\frac{1}{8}$ in. to $\frac{1}{4}$ in., and the side bars should have a groove in them about $\frac{1}{8}$ in. deep, and just wide enough to take Abbott's new foundation. Then I think the combs may, with ordinary care, be put through the extractor without risk of damaging them, and that, too, without the tedious and troublesome process of wiring. I hope the firm referred to will see their way clear to adopt the suggested alterations in their frames, which I am of opinion would be great improvements.—"BUZZING," *Broadway, April* 25.

TAKING BEES TO HEATHER FOR PROFIT.

[1837.] I notice a question is asked in B.J. for April 19 (1001, p. 156), whether it is worth while conveying two stocks of bees fifty miles to heather to secure a second take of honey. You do not advise it if profit only is studied. I think, however, that if two or three joined and sent two stocks each in charge of a man it would pay. Anyway, I give my own experience last year, if you think it will help in deciding the question. I took five stocks twenty-five miles to heather, and got from four of them 104 lb. of honey—the fifth being weak, gave nothing. The expenses came to 3s. 5d. each way per hive, and they were away a month. I would not scruple to take six or eight stocks fifty miles, though there is always a risk in the weather turning out bad for honey gathering.—J. B., *R., April* 25.

[We are very pleased to learn that our correspondent made a success of his heather journey last year, but, so far as the reply given on p. 156, the facts stated above tend to confirm the soundness of the view we expressed therein.—EDS.]

EARLY SWARMING IN THE NORTH.

[1838.] SIRS,—I just send you a bit of news; if you think it worth while put it into the JOURNAL. On Saturday morning, April 28, a hive that had been wintered on twelve frames gave me a very large swarm, which we consider very early up here in the North, where the end of May or well into June is about the time when swarming is usually commenced. I do not encourage swarming, but would keep them back if I could. All my hives are in a very advanced state, and though this morning (Monday) is dull, cold, and a bit wet, I have at one hive a large bunch of bees hanging out. I have not had to feed neither last autumn nor this spring, so I think things are looking well with us in the North. CHARLES SCOTT, *Caton, Lancaster, April* 30.

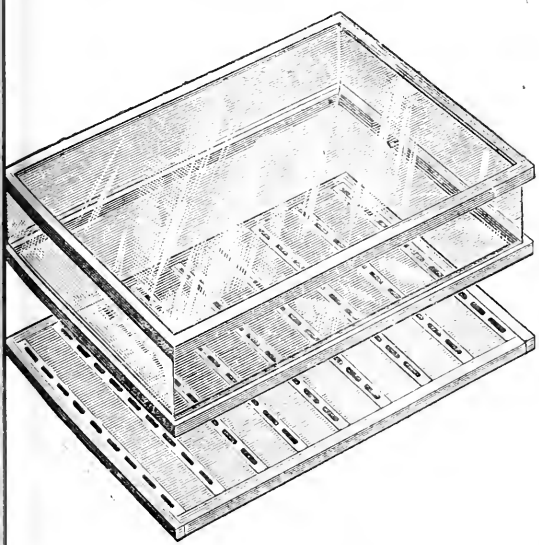
LACE-PAPER FOR SECTIONS.

[1839.] Perhaps some of your correspondents may be able to inform me, through the medium of the B.J., where I can get lace-paper for sections the proper length, and, if possible, with V-cuts for the corners. The paper is a great embellishment to sections, but the labour of cutting each strip the right size and fitting the corners is too much, where, as in my case, "time is money."

Favourable reports from this district. Stocks wintered well, and are in good heart.—ARGYLL, *Campbeltown, April* 29.

NOVELTIES FOR 1894.

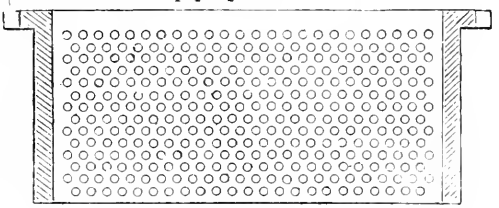
This useful super is largely used by Mr. W. Hogg, of Castle Douglas, N.B., to whom I am indebted for the pattern.



HOWARD'S "CASTLE DOUGLAS" SUPER.

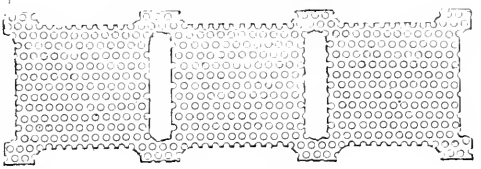
The super (as illustration) is same size as the ordinary twenty-one 1 lb. section rack, and the queen-excluding adapting board and super may be used with such.

When filled with honey and sent or taken to shows or for sale the super is placed top side down upon a carpet or felt-covered board, with a plain board to protect the underside. Either of these boards may be used as a stand for show or shop purposes.



HOWARD'S "WELLS" DUMMY.

New and approved pattern.



THE "SHEPPARD" METAL DIVIDER.

For sectional work, and for ensuring perfect work in 1 lb. sections.

THE "J.H.H." FRAME.

These frames are heat-retaining, self-fitting, and self-distancing; also perfect for extracting. Eight frames just fill the space of ten spaced to the ordinary standard distance the one inch and thirteen-sixteenths distance is just as freely accepted by the bee for storing surplus honey as the narrower distance.

For illustration of frame, see advertiscon p. iii of advertisements.

Queries and Replies.

[1018.] *Packing Bees for Transit in Frame-hive.*—I should be obliged for your opinion as to best method of packing a stock in a "Sandringham" hive—Lee's frames—"W.B.C." ends, to travel 300 miles by rail and steamer? My own idea is to screw a piece of wood along top of frame ends, back and front of hive, to prevent upward motion. Remove slides at entrance, fix on a piece of perforated zinc, whole width of entrance. Then tie hive with a rope to prevent cover coming off. Hive, of course, will be packed down "winter height."—J. W. CHALMERS, *Greenock, April* 25.

REPLY.—If the hive and bees are not in charge of any person, but left to take their chance on such a journey, a "distance rack" should be affixed across centre of floor-board to keep the frames spaced on their lower sides,

as the metal ends keep them at the top. The "rack" is made from a slip of wood ½ in. thick and 1 in. wide by cutting projections in its narrow side to within ⅜ in. of the depth. These projections pass up between the frames and keep them apart. For the top make a frame of wood 1½ in. deep, and of such a size that its front and back rest on the metal ends while the other two sides rest on the hive top. Cover this frame with "scrim" or cheese-cloth stretched tightly across, so that when the frame is in position and screwed down a space of 1½ in. is afforded above the frame-tops into which the bees can pass for air if overheated. Fix perforated zinc before entrance as proposed, cord the hive strongly, and "label live bees, with care." We need hardly add that only combs well secured to the frames, and over a year old, are fit to send on such a journey as the above.

[1019.] *Dealing with Queenless Hive.*—I should be much obliged if you could help me in any way as to the following :—1. I have two stocks. One seems to be very strong, the bees covering about ten frames, with plenty of brood ; the other covers five. I examined the latter about a week ago and saw neither brood nor eggs, and I have looked the combs over to-day again and find them still in the same condition. Is it not a sign of queenlessness ? The bees take syrup well and are carrying in pollen. Supposing there is no queen (2) would it do to give them a frame of brood and eggs from the strong stock in order to rear a queen ? 3. How much syrup ought bees to take in in spring ? Would half a pint a day be too much ? — J. Morgan, *Southport, April* 27.

Reply.—1. If no eggs or brood is present at this time the stock will no doubt be queenless. 2. You might try them with a frame from the strong hive as proposed, and they may raise a queen, but if the bees have been a long time queenless it is not certain they will do so. 3. A pint of syrup per week is ample for spring feeding.

[1020.] *Advice to Beginners in Bee-keeping.*—As a beginner I wish to ask :—1. Should the metal ends (Neighbour's) of frames be outside or inside of the inner walls of hive ; would they not affect the temperature of hive too much if inside ? 2. Should the frames which are not covered in a hive by a section crate be covered with a calico quilt stretched over them, and then a piece of board on top of quilt ; also, should the top of crate be covered with the quilt pressed close down on the top of sections, and board over quilt, or ought there to be a passage left for the bees to pass over from section to section ? 3. What distance should the two outside frames be from the dummy or sides of hive, to prevent bees attaching the frames to them. 4. Would the same way as described and illustrated in last week's issue for hiving a swarm be suitable for a hive with floor board that fits in and under the outside walls of hive—with frames running across the entrance—if raised at side instead of front ; and will the queen go in with the other bees, or will she have to be caught and put in separately first ? 5. Which is the best and simplest feeder and smoker for a frame hive ?—Beginner, *Ilford.*

Reply.—We may say at the outset that no beginner in bee-keeping on the modern plan should omit the purchase of a *Guide Book* of some kind which supplies all the details of bee-management. It is impossible to obtain the needful information in our reply column. For the rest :—1. Obviously one face of the metal end must be inside the hive, because of the 'end' only spacing the frames but keeping the bees from getting outside. 2. Any frames not covered by the section-rack should be carefully and warmly quilted down—as the brood-frames always are—with several thicknesses of carpet or felting, the top of sections being covered down in the same way. Bee-passages are provided in a properly-made rack, and to leave the openings in upper side of sections uncovered would stop the bees from taking possession of them. 3. Quarter inch from hive sides and ⅜ in. from dummy. 4. It is difficult to answer this question without knowing the exact form of hive being dealt with, but as it would do no harm to raise the front of hive one inch for the short time during which the swarm is entering, we should not advise raising it at the side, especially if the hive is made to take more frames than are required for the swarm. 5. There are dozens of good feeders and smokers on the market, and it would be palpably unfair for us to say which is "the simplest and best" to the detriment of all others, when it is so clearly a matter of personal opinion.

[1021.] *How to Judge when Honey-flow Begins—Using Queen Excluders.*—1. How can one know for a certainty the right time to put the section-crate on the hives ? I should like to know whether there is any unmistakable sign of the honey-flow setting in ? One reads in *guide books* what is to be done "when the honey-flow has set in," but how is one to know for certain ? If it is determined by the dropping of loaded bees at the entrance of the hive after their foraging expeditions, or the appearance of bits of new wax on the combs, then I should say it had set in here, as these signs are visible : the hives are crowded with young bees, and bee forage very plentiful. If I should be right in my conjecture, would you advise my putting on section-crates at once ? 2. Do you consider the zinc queen-excluder indispensable before putting on sections ?—B. W., *Barnstaple, April* 25.

Reply.—1. Experience soon teaches the bee-keeper when honey is coming in, but in the meantime there is no more sure method of

ascertaining when surplus room is required than by raising the quilt a little, so as to expose the first frame on each side. If a good few bees are seen in the space between the outer combs and the hive-sides there are bees enough; then go a little further, and note if the cells in upper part of combs are being lengthened with light-coloured wax—this is a certain sign. Judging by the indications stated by our correspondent, no time should be lost in giving sections, but we should take a peep under the quilts nevertheless, to make quite sure of the condition. 2. It cannot be said that queen-excluder zinc is "indispensable," excepting as a means of ensuring the queen's exclusion from the compartment of the hive below which it is placed. For the rest, it is a matter of opinion, especially in using sections. Many use it even with these, some don't, the latter declaring that the queen very rarely enters properly made section racks. But we think nearly all concur in our view, that it is very bad practice not to use it below frames worked for extracted honey.

[1022.] *Suspected Foul Brood.*—I have a stock of bees affected with foul brood. The stock is fairly strong and very active now, and the combs are fairly well filled with brood. The foul brood can be detected by the eye and also by the bad smell. If the disease is not dealt with I am afraid it will spread during the summer and get worse. Please give your advice as to what I had better do.—J. R. S., per H. S., *Arnold.*

Reply.—We much prefer being certain as to the presence of foul brood before advising. Kindly cut out a piece of the comb containing dead brood and forward it in a tin box—or some such package—when we will be better able to deal with the case. So many mistakes are made in judging whether brood is diseased or not, we cannot do less than ask that this should be done.

[1023.] *Dwindling Stock.*—1. I have two stocks of bees, one of which is doing remarkably well, but the other is dwindling down instead of increasing in numbers. On opening the latter to-day, I saw the queen, and found they had plenty of stores, and some bees were taking in pollen. Do you think—as the frames are full—that the queen has no place to lay, and that breeding is therefore not going on as fast as it ought? What do you advise me to do? 2. How many frames ought a hive to contain before sections are put on? 3. How do you account for the floor of the hive being damp, as the roof is quite sound? —F. W. Hamlyn, *Totnes, April* 27.

Reply.—1. If the combs are full of honey, and there are no vacant cells in which the queen can deposit eggs, it is obvious that no increase in population can take place. The remedy is to remove a comb or two of sealed food, and either replace with full sheets of foundation or extract the contents and return the empty frames. 2. About ten of "standard" size. 3. The dampness is the result of condensation of the warm air of the hive on the cooler surface of the hive wall, the moisture running down on to the floor-board. It does no harm at this season.

[1024.] *Publishing Names of Exhibitors.*—Now that you have the names of the hive makers who will exhibit at the Royal show at Cambridge, could you not publish them in the British Bee Journal. I have lost a day's work visiting shows on purpose to see personally certain hive makers, only to find they were not there, nor exhibiting, and perhaps other readers of the British Bee Journal have been disappointed in a similar way.—W. Ford.

Reply.—We do not know why our correspondent assumes that *we* have the names of intending exhibitors at the "Royal" show Anyway, he is entirely in error. No one has the names but the secretary, and we may safely say that gentleman knows his duties well enough to keep the information to himself. A postcard to all the best known makers would only cost a few coppers, and perhaps obtain for our correspondent the desired information.

[1025.] *Queen cast out of Hive.*—1. I have a stock of bees covering six frames, and four of which contained brood. They were doing well, and I hoped to have them ready for the clover, but yesterday I found the queen dead outside the hive. In my other two hives there is plenty of capped drone brood. Do you think if I let them requeen themselves I should get any surplus from them? 2. In how many days is a young queen likely to hatch out, and how soon will it be before she commences to lay? 3. If, as the brood hatches out, I put the empty combs in one or other of my other hives to be filled with eggs, and then replace them again, do you think it would answer, or would it burden the other three hives, which at present are very strong ones, having a super on? 4. If I did this, do you think they would be strong enough to super by the middle of June? An answer to the above queries would greatly oblige, as I am rather doubtful how to act.—F. C. Bell, *Dulwich, April* 30.

Reply.—1. Of course, the time which must necessarily elapse before any addition can be made to the population will seriously lessen the chances of a harvest from the stock, though the progeny of the new queen would be at work by mid-June, and so they may yield some surplus. 2. She may hatch on the twelfth or thirteenth day, and may not until the sixteenth, the difference depending on the age of the larva chosen to raise her from. 3. You might help the stock with a comb of brood from each of the other hives, which would assist the queenless bees very much. By inserting a full sheet of foundation for combs of sealed brood you will not retard the

other stocks in any appreciable degree. 4. That would depend largely on other circumstances being favourable or adverse.

[1026.] *Clipping Queens to Prevent Swarming.*—I have four stocks of bees, the care of which I shall be obliged to give over to a lady who is anxious to prevent swarming as much as possible, she having no time to watch for the swarms. Would you recommend me to clip the wings of the queens? I see this plan is spoken of in bee-books, but as I have never heard of its being used, I should like your advice.—J. D. B.

REPLY.—"Clipping" queens will not prevent swarming; nor is it supposed to do so. It is only intended to stop the swarm from decamping by reason of the queen's inability to accompany the would-be runaways. The matilated queen, being unable to fly, drops to the ground, where, if discovered, she is joined by the bees of the swarm, but they require hiving in the ordinary way. There is no sure way of preventing swarms. Giving timely room, ventilation, and shade in hot weather lessens the risks very much, but only that.

[1027.] *Swarms from "Wells" Hives.*—To-day (29th) I had a swarm from my "Wells" hive which settled on a hedge. There were two distinct clusters, and I took them to be two swarms. We hived them easily in separate boxes, soon put them into spare hives, and all went quietly, when about two hours later I found that one of the swarms had disappeared. The other lot is going on well. Do you think they were two swarms?—W. R. TRAVISS, *Willesden Green, N.W.*

REPLY.—If both compartments of the "Wells" hive swarmed, there would be two queens, and the probability is that both were hived in one of the "clusters" named. If this is so, no doubt the bees of the swarm which "disappeared" either joined the one now doing well, or returned to the parent hive.

[1028.] *Bees Dying in Spring.*—A friend of mine has three stocks of bees, which I occasionally assist in managing. About three weeks ago the bees of one hive began to die off in great numbers, and in a very short time at least a quart were lying on the ground. I have never visited them during the daytime, but in the evening the bees that had been thrown out during the day were still moving their legs. I have opened the hive, but could find no apparent reason. They have plenty of food, and were at the same time fed with a stimulating feeding-bottle. I have had a note to day saying, "Hundreds more have been thrown out." I send you a box of the bees that have been thrown out, and would be glad if you could enlighten me as to the cause of death.—LAKE DISTRICT, *April* 21.

REPLY.—The symptoms described rather point to it being a case of that mysterious bee-complaint known among bee-keepers as the "nameless disease," for which no reliable remedy has been found. In Germany it is called the "May disease," because of it usually making its appearance in that month. After continuing about two or three weeks, it nearly always stops, and the hive then goes on as usual.

Echoes from the Hives.

Honey Cott, Weston, Leamington, April 26.—On Saturday, the 21st inst., I moved some single stocks into hives intended for working on the double-queen system, and was agreeably surprised to find them very forward for the time of year; lots of brood and plenty of drones on the combs. Since then whenever it has been fine about middle of the day, there is no mistaking the heavy hum of the drones, even though the bees were as though they were all going to swarm together after a good spell of wet weather that will make the beef and mutton grow (as some folks say), also the honey plants. I was standing under a sycamore tree about six o'clock last night, the sun shining bright and warm at the time, and the sree appeared to be literally alive with bees, so thick were they on the blossoms. The weather having been showery for four or five days, I took three large cakes of candy to put on some stocks, a mile away from home, just to cheer them up a bit while the wet lasted. When I got there the bees were taking full advantage of the bit of fine weather, the pollen-carriers did bundle in. I have been gently feeding with thin syrup at my home apiary, and am well satisfied with the result, although I left about six stocks to themselves just to see which I thought did the best. There are vast quantities of dandelions in bloom all around, and lots of bloom of turnips and greens, &c., which I have left in the allotment specially for the bees. The hawthorn will be out in a few days; apples and pears are just now at their best and alive with bees. Lucky are people that have got plenty of bees near to them, so that when it is fine the bees may fertilise the blossoms. When it is so stormy and squally, bees seldom venture very far from home as they do in more settled weather.—JOHN WALTON.

SEASONABLE QUESTIONS.

ANSWERED BY G. M. DOOLITTLE.

Pollen Necessary for Brood-Rearing.

Question.—Is it necessary for bees to have pollen in the hive for them to raise brood?

Answer.—I believe that if such a condition were possible as not having a single particle of pollen in a hive, and where none could be obtained by the bees from any source, no

brood could be reared and brought to perfection; but I doubt the possibility of there being such a condition as absolutely no pollen in any hive containing a colony of bees that has passed the winter in such hive. All honey contains more or less floating pollen; combs in which pollen has been stored previously contain many particles of the same, according to Professor Cook, and if nothing else is available bees will collect fine particles of wood and use in place of farina from flowers, as I have frequently seen them doing from a pile of fine sawdust which was taken from the shop where I used my plane-saws. Elisha Gallup told in the *American Bee Journal*, years ago, how he hived a swarm of bees so late in the season that they built only three pieces of comb, about as large as the hand, and, as an experiment, he fed them honey all winter, and in early spring they commenced brood-rearing before being taken from the cellar, finally building up a fine colony and storing considerable surplus honey that season. I have had similar experiences, but find that the less pollen there is in the hive the less brood will be reared; and where there is scarcely any pollen, or, as most people would say, none at all, there would be but few cells of brood raised, and this brood be scrimped in food and appear weak and sickly. Nothing incites brood-rearing like plenty of pollen in the hive, with the necessary honey; and with the advent of new pollen brood-rearing commences in earnest. I have fed the bees meal and flour many years, thinking that it would take the place of pollen from the flowers; but after a careful watching I am satisfied that such is not the case, and I doubt its paying to feed bees in this way, aside from the fun there is in seeing the bees work on the flour, where pollen is to be had from the flowers in from forty to fifty days previous to the honey harvest.—*Gleanings.*

Bee Shows to Come.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries close May 31. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries close May 1. Post entries at double fees till May 12. Secretary, John Huckle, B.B.K.A., King's Langley.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

J. E. Wilkes (Wolverhampton).—We are glad to hear that the advice given on p. 137 served the purpose so well. Replying to queries:—1. The presence of drones at this season indicates preparations for swarming. 2. When hives are full of bees, and honey is coming in, supers should be set on without delay. 3. Old brood-combs, though perfectly healthy, are always dark in colour. 4. Honey stored in old brood-combs is sure to be more or less adversely affected both in flavour and colour compared with that in white virgin combs.

H. Twentyman (Castlecroft).—Drone-traps are rarely used now, preference being given to the better plan of keeping combs free from superfluous drone-cells. Meadows' new "swarm-catcher" makes an excellent drone-trap.

Thos. McMurdo.—*Weight of Honey gathered by Bees in a Single Day.*—We cannot put our hand on the "record" return of honey gathered by a stock of bees in one single day in England; though we think the increase in weight gained by a single stock belonging to the senior Editor of this journal, Mr. T. W. Cowan—20 lb. in one day—has rarely, if ever, been exceeded in England.

John Norry (Ironbridge).—*Queen Deposed.*—The queen sent is a very fine one, and bears no appearance of being old and worn out. But for your statement that the hive had never been opened this year till after the queen was cast out, we should have feared some injury to her had occurred while lifting out the frames; as it is, however, the case is quite a mystery. Give the bees another chance to raise a queen by inserting a comb containing eggs and young larvæ.

E. Turnham (Herts).—*Pollen-choked Combs.*—No trace whatever of foul brood. The comb is choked with pollen, the sealed cells having a slight covering of honey. Perhaps there are no empty cells for brood, as you state that "there are a fair amount of bees, but they are not very busy." It is either so or the hive is queenless.

I. U. Terson.—*Suspected Foul Brood.*—Of the three samples of comb received only one has any sealed cells at all, and these only two or three in number, without the slightest trace of any contents. The other samples are merely pieces of old mouldy and misshapen combs, which ought to be removed and melted up forthwith. There is no reason to suppose the hive is foul-broody.

R. J. (Bentham).—The insects sent belong to the *andrena* species of British bees, and are commonly known as "sand bees."

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

BEE PLANTS, Limnanthes Douglasii, 100. 1s. 3d. Iceland Poppies, 25, 1s. 3d. Limnanthes Douglasii Seed, 6d. packet. HUNTING, Loddon, Norfolk. D 78

ENGLISH and ITALIAN BEES FOR SALE. T. HILL, Sutlands, Cannock Road, Wolverhampton. D 79

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PURE ENGLISH BEES. Splendid strain Swarms from 10s. 6d., Nuclei 5s. on rail, Queens 3s. delivered. ALSFORD, Expert, Blandford. D 80

FIRST SWARMS of my splendid strain of BEES, which cannot be excelled, 15s. packed free. JOHN WALTON, Honey Cott, Weston, Leamington. D 72

BEES (Carniolan) FOR SALE. Swarms (including box) 22s. each. Ready early in May. Order early. C. MORREY, Five Ways, Neston, Chester. D 76

APIARY.—Young man requires SITUATION in above. N., 7, Merton-street, Banbury. D 73

GUARANTEED HEALTHY NATURAL SWARMS, (Pure Natives), 3½ to 4 lb. each, price 12s. 6d. Packing included. Expected middle May. Orders in rotation. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. D 74

WANTED, SECTION CRATES in exchange for good extractor. WILLIAM PARSONS, Esq., Ashurst-place, Langton, Tunbridge Wells.

WANTED, intelligent LAD, with some knowledge of gardening. Age about 15. Must be willing and obliging, and of good character. Board, lodging, and small wage first year. BADCOCK'S FLORAL DEPOT Bexhill-on-Sea. D 65

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WANTED, EMPLOYMENT in Apiary by YOUNG MAN. Used to bees and appliance making. Seven years in trade. T. EARL, Lowfield Apiary, Crawley, Sussex. D 70

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WANTED, SECTIONS of COMB HONEY (any quantity), and HONEY in bulk, state price, &c. Orders also given for coming season. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London. 199

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

STOCKS, NUCLEI, SWARMS, and QUEENS FOR SALE. Address, The Rev. C. BRERETON, Pulborough, Sussex. 192

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PURE, Prime Swarms of my Selected Strain of English Bees, all 1893 Queens, Packing-box, and put on Rail free, price 15s. Address, W. WOODLEY, World's End, Newbury.

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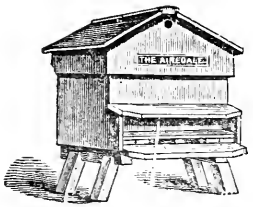

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Editorial, Notices, &c.

MANUFACTURED COMBS.

Among the novelties for 1894 already introduced, and those anticipated, it is questionable if any single one will be regarded with more curiosity, if not interest, by bee-keepers than that just brought under our notice by Mr. Otto Schultz, of Buckrow, Germany. Whether or not faults may reveal themselves in the new "bee-appliance" when practically tested we do not stop now to inquire, but we have presented to us a sample of finished comb — made from genuine beeswax with worker cells $\frac{1}{2}$ in. deep—which has never been touched by bees at all, but is just as it comes from the machine of the manufacturer.

That it is heavier than natural comb is seen at once, but if acceptable to the bees, and fulfilling its purpose effectually, the fact of artificially-made comb being not only possible, but actually before us and on the market, may have a considerable effect on the future of bee-keeping. Our first impression was that it takes too much wax and will, consequently, be too costly for frequent use; but apart from that aspect, and *if it works out right in other respects*, combs may be bought ready fitted—or for fitting—into frames in such a way that all the devices for ensuring straight combs, the many and various contrivances for having them built securely in frames and attached to the wood on all sides, the difficulties in controlling or regulating the number of drone-cells, in fact, quite a lot of troubles to the bee-keeper, will vanish as if by magic! The sample piece of comb is just as true, straight, and level as a piece of planed deal-board an inch thick. It fits the box in which we received it quite close all round, no packing is used, and, when the lid is on, it may be dropped on the floor without being broken.

We can well imagine bee-keepers asking such questions as—(*a*) What will the bees do with it; will they pare the side walls down to the normal thinness of natural comb? (*b*) And if they do, what becomes of the superfluous wax? or (*c*) Seeing that the cells are minus the upward tend of natural comb, how will the bees like that? (*d*) What will it cost? and so on—All of which questions—saving the last one—we leave unanswered for the present. We hope, however, to make a practical trial of the new article, and will report results.

Meantime, and lest our foundation-makers should feel any alarm for their future trade, it is reassuring—from *their* standpoint — to know that bee-keepers will not be too ready to spend ten shillings or so per hive for fitting it up with artificially-made combs, however good. And this will be about the cost, according to the prices sent, which are as follows: Frames, ready-fitted with comb, size, $14\frac{1}{2}$ in. × 9 in., 1s. 6d.; ditto, 9 in. × $7\frac{1}{4}$ in., 9d.—these being the sizes used in Germany. "Standard" frames should run about 1s. 2d. each, at these prices.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the committee of the above association will be held at 103, Jermyn-street, W., on Thursday, the 10th May, at four o'clock sub-committee meetings being held, as usual, at 17, King William-street, prior to the above meeting.

At six o'clock p.m. the Quarterly Conversazione will take place at Jermyn-street, which all members and bee-keepers connected with affiliated associations, who happen to be in town, are cordially invited to attend.

ACCIDENT TO MR. J. M. HOOKER.

We regret to record a rather serious accident which befel the above gentleman on the morning of the 21st ult. Mr. Hooker had, by request, journeyed to the North of Scotland with the purpose of imparting instruction in modern methods of bee-keeping among the members of the bee-society established by the Hon. Miss Fraser on the estate of her brother, Lord Lovat, near Inverness. He had already spent a week there, and was, we understand, getting on pleasantly and well with the northern bee-keepers when the unfortunate accident occurred. While being driven in a dogcart by one of Lord Lovat's grooms the horse bolted and became unmanageable, and while going at a great pace one of the wheels collided with a gate-post, and Mr. Hooker was thrown into a ditch some considerable distance below the level of the road, sustaining severe injuries in his fall. He was conveyed back to Beauley with all speed, and on being examined by a medical man there his collar-bone and three ribs were found to be broken. At his own request he was removed to the Infirmary at Inverness, where he now remains, attended by his daughter, who on hearing of the mishap at once proceeded north to be with her father. Mr. Hooker's many bee friends will be pleased to hear that he is doing very well, and hopes to be all right again in a few weeks.

WARWICKSHIRE BEE-KEEPERS' ASSOCIATION.

The annual meeting was held on Thursday, April 26, in Birmingham. Mr. R. Ramsden presided, in the unavoidable absence of Mr. P. A. Muntz, M.P. The annual report showed that steady progress had been made during the year. The Chairman, in moving its adoption, said he was sorry to see that there was an adverse balance of £13. He should have liked to have seen a bigger grant made by the County Council, and he did what he could to obtain more. Still he did obtain a grant, which he considered rather better than nothing, but the association did not seem to think so, seeing that they refused it. He emphasised the pecuniary value of bee-keeping to cottagers. The Rev. J. Hatton seconded, and remarked that the adverse balance was due to the increased expenses in connection with the Solihull show. There had been a material increase in the number of subscribers and members. The resolution was carried. On the motion of Mr. Pearson, the president and vice-presidents were thanked for their services and re-elected. The committee and honorary treasurer and auditor were also thanked and re-appointed, and Mr. J. N. Bower re-elected honorary secretary, Mr. J. R. Ingerthorpe assistant secretary, and Mr. W. B. Webster expert. The business concluded with the usual vote of thanks, after which Mr. W. B. Webster (the expert) delivered a lecture upon "Supering, extracting, and marketing of honey."

HUNTS BEE-KEEPERS' ASSOCIATION.

The annual meeting of the Hunts Bee-keepers' Association was held on the 14th inst. at the Fountain Hotel. Mr. A. W. Marshall presided, and among those present were the Rev. F. Jickling, the Rev. C. G. Hill (hon. sec.), Messrs. J. Linton, W. H. Woods, R. Brown, C. N. White, Sharpe, Watts, E. Allen, Hicks, and Mrs. Allpress.

After some preliminary business had been gone through, the hon. secretary read the annual report, which recorded a very favourable season for bees last year, and gave useful advice as to grading honey. It was stated that technical lectures on bee-keeping had been given by Messrs. Howard and White; also, that if the funds of the Association permitted the expenditure it would be desirable to follow the plan of employing experts to visit members needing their services. The accounts show a balance in hand of £1. 3s. 4d.

The report was adopted, as was a motion to increase the subscription to the B.B.K.A. to two guineas this year instead of one guinea as formerly.

The officials of the Association were re-elected *en bloc*, and on the conclusion of the business Mr. C. N. White read his promised paper on "Bee Diseases," for which he was accorded a hearty vote of thanks.

IRISH BEE-KEEPERS' ASSOCIATION.

The committee met on 1st instant. Mr. Read in the chair. It was resolved to give lectures and demonstrations in the bee-tent in June at or near Castlederg, followed by an evening lecture, illustrated with lantern slides, on bee-keeping.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C."* (*see 1st page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1840.] We have reached the merry month of May, though up to the time of writing the temperature is more like March than May—dull, cloudy days, with cold, boisterous winds and occasional glimpses of the sun; bees busy for an hour or two in the middle of the day, though many must get lost in the fields by chilly weather and cold storms, as we do not get spells of warm sunshine afterwards to revive the weather-beaten little labourers, and enable them to reach home with their loads of honey and pollen.

Our swarming season has not opened yet. One in Newbury district and one in a cosy dell near here were the earliest instances this season. I heard of one at Peasemore, some two miles from here; but these returned to the parent hive next day. Probably an empty hive, no furniture, and no larder, coupled with a cold day and colder night, decided the record-breaking swarm to return to more normal habits, and await a more propitious opportunity to establish a new home. The Newbury swarm was in good hands, likely to receive a supply of food, and in the other case I gave instructions to feed continuously till a break in the weather.

Stocks in both my home and out-apiaries are progressing satisfactorily, and I have no doubt swarms will soon be on the wing, weather permitting. How are those March and April swarms prospering that the new method was to produce? I trust those who have given it a fair trial will enlighten us on the success or otherwise of their endeavours to secure abnormal bees, and also if the "plumping" up of weak stocks has been successful. I am too

busy myself to give these new ideas the attention required to insure their success, therefore hope to hear from others who can devote the time to experiments.

Mr. McEvoy reports that foul brood is decreasing in Canada, and Dr. Miller relates in *Gleanings* a case of foul brood being cured by naphthaline placed in the hive. The dead brood was cut out of the frames, and as the colony was found to be queenless a week or two later a small nucleus colony was added, and naphthaline continued. The colony prospered, and when the time for packing for winter came it was one of the best in the apiary, with no trace of foul brood. This particular case of curing foul brood occurred in France, and was first given in the French bee-journal *L'Apiculteur*. But it proves the value of naphthaline as a germicide, and shows that with a persistent use of the remedy it is effectual. Possibly, the internal use of naphthol beta given in food to the bees would cure more rapidly, but the above simple plan must commend itself to even the careless bee-keeper—as there was no boiling the hive and its fittings, no starving the bees for forty-eight hours, no expense of new frames and combs. Either the microbe is not so tenacious of life as our scientists have led us to believe, or else the germicidal powers of the remedy is more powerful than we suspected. Messrs. Abbott Bros.' new cheap all-wood frame is a marvel of good workmanship, and designed to meet a want. There are some bee-keepers who object to the use of metal inside the hive ; to such this frame will come as a boon ; it is also interchangeable with all the styles of metal ends which are level with the tops of bars, as the distance-keepers are on each side on similar hives to the metal ends. The foundation is fixed in the centre groove, and held in place by the usual wedge in the outer groove. This method of fixing foundation has many advantages over the old style of saw-cut in the top bars :—1. There is a saving of wax, as the groove will only take a narrow strip of the top part of a sheet of foundation. 2. The method of fixing is *sure*—at least it has been so in my hands. 3. There is no place in which the larva of the wax moth can revel in luxury and comfort as in the old style saw-cut. 4. The top bars of brood nest can be cleaned more expeditiously.

A correspondent suggests that we have a "beginners' column," or corner, or page, to contain elementary suggestions helpful to novices in our ranks. Well, I suppose our raw recruits want training in the most rudimentary parts of the craft. Some in answer will say, let the beginner buy a cheap manual on bee-keeping. Why fill our pages with milk-sops suitable only for tyros ? Give us something practical, something useful to the advanced bee-keeper. Help us to keep abreast of the times in things apicultural. If we take this line of argument, what is to become of the new hands that are now taking—and will in the future take—hold of the craft, aye, and be the mainstay of it after we older ones have joined the Majority ? Therefore, I would say, let us endeavour to meet the wishes of all interested in the industry, and if a page can be given in the *Record* monthly and a page for beginners every alternate week (shall we call it the A B C class?) in B.B.J., these simple notes may prove instructive and suggestive to the more advanced in the higher standards.—W. Woodley, *Beedon, Newbury.*

THE "WELLS" SYSTEM.

REPLY TO MR. WALTON'S "OPEN LETTER."

[1841.] I see in B.B.J. for May 3, p. 173, our friend Mr. John Walton addresses a few questions to me, and I have much pleasure in answering them. He says :—1. "Do you keep them (the bees) chiefly in hives that only hold seven frames on each side of the dummy, and tier up on top with a box of shallow frames, continuing the dummy up to the top of this first box, thus giving the queens opportunity to extend the brood-nest upwards ?" I answer, that is exactly what I do ; but I find that the dummy in this second box need not be perforated. A plain piece of board from one-eighth to three-eighths of an inch thick will answer the purpose well, but I would much prefer the hive large enough to hold twenty standard frames, and thus confine each queen to ten frames on each side of the dummy. By this means all tiering up above the brood-frames in body-box would be for surplus honey.

2. Mr. Walton says :—"At the end of the season what do you usually do with these frames of comb, for I presume the brood-nest is reduced down to the bottom lot of frames ?" I answer, that is so. I proceed as follows :—After removing the last surplus box from above the box of shallow brood-frames, I take off the queen excluder zinc and drive both queens down into the bottom lot of frames, and then remove the box of shallow brood-frames, place the queen excluder zinc over the brood-frames in the lower body, and set the box of shallow brood-frames on top of the zinc. In about three weeks all brood in the latter is hatched out, the box of shallow frames is removed, a super-clearer is then slipped under, and when the box is clear of bees it is taken into the extracting-room and the honey removed, after which the wet combs are cleared by the bees in the usual way.

3. Mr. Walton then says :—"In the case of swarms issuing from these stocks when you take the combs and brood away to form nuclei, do you return the set of shallow-frames next to the brood-nest ? I ask this supposing the queens may have been up there, and that there will be brood in these shallow-frames." That is so in every case. Everything is put back on to the hive as it was before the swarm issued. Of course, the lower brood-nest is filled up

either with clean empty combs or full sheets of foundation.

4. He next says, "Do you keep to these fourteen-frame hives entirely, or do you use some holding ten frames on each side?" I answer, Hives holding fourteen-frame hives are used, although I have two taking twenty frames in each with entrance at one end, and in order to adopt these to the two-queen system, another entrance has been cut at the side. But I do not like them so well, as the floor-board cannot be lowered and raised as in the others, being all in one piece, and if lowered at the end as arranged when working with one queen only it would leave a space under dummy, and so allow the two queens to meet. Hence my not favouring these hives. I think a hive to hold twenty standard frames with entrance the whole length of one side and the frames at right angles to it is much to be preferred in the two-queen system.

5. Mr. Walton then says :—"When giving surplus chambers—on top of the shallow-frames to which the queens have access, and on which excluder is placed—do you tier up with boxes of shallow-frames on which the excluder is placed with boxes of shallow-frames full length, so as to extend over all the brood-frames of both lots of bees?" I answer, certainly, and this is one of the main features in the system. He also says :—"In giving the first lot of shallow-frames to extend the brood-nest, do you give worked-out combs or sheets of foundation for preference?" I prefer to use the same combs in shallow-frames which have previously been used for brood again and again, until considered advisable to melt them up into wax. In fact, use them just the same in every way as I do my standard-size frames.

I have endeavoured to make plain to friend Walton what he is not clear about, and if anything is still uncertain I do not mind trying again; but I fear I have taken up too much space, anyway you know how to use the scissors where required. — G. Wells, *Aylesford, Kent, May 7.*

ARTIFICIAL SWARMING.

HOW I DID IT.

[1842.] On April 29 I noticed a cluster of bees just above the entrance of one of my skeps, and, as drones were flying very freely, I determined to make an artificial swarm. On May 1, about three o'clock in the afternoon, after getting ready the materials required, I commenced in the orthodox manner by sending a few puffs of smoke into the hive, and after giving the bees a minute or so to gorge I inverted the skep. And what a sight met my gaze! Not a portion of a comb could be seen for the quantity of bees the skep contained. The day being dull, doubtless nearly all the bees were at home. I was obliged to divide the mass with my hand before I could see in what position to fix the empty skep preparatory to driving. When I had this right, and began fixing the skep, I found two of my driving-irons were missing; so I was obliged to hold the empty skep in position with one hand, and drive the bees with the other. After three minutes' driving I concluded I had got sufficient bees, so proceeded to hive them in a bar-frame hive already prepared; but, as I had not as yet seen "her majesty," I was not very sanguine as to the result. However, I gave them some food, re-adjusted the quilts, and, as the bees seemed settled in their new home, began to think all was right. But alas! my hopes were short-lived, for soon the bees were seen to issue pell-mell and make for their old abode. I thought to myself, this won't do, for it was now getting chilly and dull, so as I had not yet found the missing irons I determined to resort to the old plan of close driving; this I did, and after beating the under skep for about two minutes with both hands, threw the bees that had ascended out upon a board in front of the hive—as so often advised in *our* journal, and soon had the pleasure of seeing the queen, together with her progeny, march into their new abode. I now knew my afternoon's work was not altogether futile.

I found the following morning that the "swarm had drained the feeder, and have since taken down two more pounds of food, so I guess they are "all serene." I shall examine them next Tuesday, and hope then to find good business done.—Percy Leigh, *May* 4.

STINGLESS BEES.

[1843.] A correspondent writes :—"Kindly let me know in your next issue where stingless bees can be had for sale."

Supposing the above to be meant seriously—and the name of our correspondent leads us to think it is not intended otherwise—we reply there are no stingless bees in cultivation or under control. There is the tiny stingless wild bee of Brazil—belonging to the Genera Trigona—which gathers a minute quantity of honey in its native home. But which is, of course, utterly useless for the bee-keepers purposes.

We are aware that some dealers of a sufficiently imaginative temperament have been wont to describe pure Carniolan bees as "practically stingless" so disinclined are they to use their stings, but these statements are, as a rule, rather discounted in practice, and our correspondent may rest assured that it would be a bad day for the industrious little hive bee, if ever it should be induced to part with its only weapon of defence.

BEES BUILDING COMB IN A TREE.

[1844.] As I believe it is a very rare thing to see a swarm settle on the branch of a tree and commence to build comb in the open, I am sending you a small branch of a loquat-tree on which a swarm settled. They were removed three times, and on each occasion

returned to the exact spot and went on building comb. However, on my return here, I succeeded in housing the swarm. Two large leaves have been joined together with comb, and another piece of comb (enclosed with branch) was built on at the end of another leaf. The latter piece, however, unfortunately came off when I took the swarm. The swarm was working in the open for ten days.—H. T. H.-H., *Gibraltar, April* 30.

[Box, with contents (which are very interesting), to hand safe. Many thanks for sending them on. It is certainly very uncommon for swarms to build combs on the spot where they settle, though not at all unusual for bees to build combs in the open under certain circumstances. What is rare, however, is the fact of the swarm persisting in returning to the spot and going on with the comb-building after being three times hived. —EDS.]

BUYING SUPER-FOUNDATION CUT TO SIZE.

[1845.] It has often occurred to me that most bee-keepers would avail themselves of super-foundation cut to the size of the 1 lb. section, and supplied in packets of, say, fifty. A very considerable loss results from the foundation required for the 1 lb. section not being in area an even multiple of the sheet supplied for the regulation-sized section, viz., $4\frac{1}{4}$ in. by $4\frac{1}{4}$ in. Manufacturers could utilise the scraps left over. Perhaps, after all, this letter may elicit the fact that such small 1-lb. section-pieces are already supplied cut to size.—AMANISHAH, *Bideford.*

INTRODUCING QUEENS.

RAPID BUILDING-UP OF QUEENLESS STOCKS.

[1846.] On the evening of April 6 I introduced Italian queens into two queenless English stocks. I naturally looked forward with great interest to the time when young bees would hatch. On Saturday last (28th) I examined both stocks, found hatching in full swing, and to-day (30th) at one p.m. quite a number of young Italian bees were on the wing. Is this unusual? It is certainly very interesting.—W. NEWBIGGING, *Stewart Hall, Dumfries.*

[Though not unusual, it does not very often happen that alien queens begin to lay immediately when introduced, as in your case, and their progeny flying in twenty-three days afterwards.—EDS.]

BEE SUPERSTITIONS.

[1847.] I would like to tell you a little of my recent experience of the superstitions and prejudices of some old bee-keepers I met with in my starting in bee-keeping. It may interest some readers. Being off duty at 6 p.m. on April 9 last, I took a stroll in search of some bees, and after walking about $1\frac{1}{2}$ mile I noticed two skeps in a cottage garden. I inquired of the owner (an aged, infirm man, but very clean and neat) if he had any bees or honey for sale. They had a few pounds left, and eventually I agreed to take some at 9d. per lb. While the daughter was preparing my honey I tried to buy a stock of bees from the old man; but he declared if he sold one stock the other would be sure to dwindle, and do no good. I then tried to buy both, but he would not deal. In answer to my inquiry, he said I might buy some bees a little further on, the owner—a very old woman—having lately died, and her relatives would likely sell the bees; but he "was not sure if any one had been at midnight to rap at the hives and tell the bees their mistress was dead." I asked if that was necessary. "Oh yes," said he, "*very.* I have been to many lots at midnight, rapped the hives, and told them of the death of the owners, and you should have heard the moaning noise they made." I thanked him for enlightening me on these things, bade him good night, and trotted off in search of the bees. I soon found them, and inquired of a woman near, if the bees were hers, and if for sale. She said "Yes." On my inquiry as to the late owner, she said "The bees never were my aunt's, though always in her garden; they were always mine, though aunt used to sit by the hour and talk to the bees." She also said that in this case it was not necessary to put crape on hives and tell the bees at midnight of owner's death, "because," she urged (with emphasis), "they never were aunt's." She evidently thought I would not buy them without some such assurance. A few words more and a bargain struck for four stocks, three in straw skeps, and one in a wooden bucket. I paid all she asked for them, telling her I would fetch them next night. I did so, and packed one skep on top of six frames, four having full sheets foundation, and two half-sheets only. Another I put on top of a large, new skep, fitted with two frames of foundation, securing the joints well with mortar. The stock in bucket I put on a stand, and hope to get a swarm from it. The other skep I sold to a friend. Do you think bees will transfer themselves into frame-hive and straw skep respectively?—I. J BUTLER, *Stoke Prior.*

[There is no reason why they should not do so, but the half-sheets of foundation should be replaced by full sheets.—EDS.]

CHECKING ROBBING.

EARLY SWARMS IN CAMBRIDGESHIRE.

[1848.] I have been very unfortunate this year with some bees I bought, losing two stocks out of three purchased, and about a month ago the last of the three was attacked by robbers, and never having seen "robbing"

among bees before, I did not know what to do. However, after referring to "Guide Book" and JOURNALS, I am pleased to say by setting up a square of glass on the alighting-board in front of hive, and hanging a carbolic cloth over, renewing it every few hours, the robbing was checked, but it took several days before it ceased altogether. They are going on all right now. My four other stocks are doing well.

Two swarms came off near here on Sunday, April 29, and one about four miles away at Baldock, so we are among the early ones.—W. J., *Royston, Cambs., May* 5.

TAKING BEES FROM HOLLOW TREES.

[1849.] In your issue of April 19 (1,000, p. 155) I notice a letter inquiring as to the best way to catch swarms from hollow tree. If "Bee-keeper," Cardiff, will write me to the address below or see me personally, and get the owner's permission, I will take the stock from the hollow tree and put them in a frame-hive for him. I should be glad if you will kindly insert this in your next issue, in the hope it may meet the eye of your correspondent.—THOS ADAMS, 1, *Railway Cottages, Ely, near Cardiff.*

EARLY SWARMS IN SCOTLAND.

[1850.] A skep of bees belonging to Malcolm C. Thomson, Esq., Park, Inchinnan, swarmed on Saturday, April 28. Another skep belonging to the same gentleman swarmed on Monday, the 30th ult. Surely this breaks the record for N.B. Skeps left severely alone. No "plumping"—*à la Simmins.*—C. M. R., *Inchinnan, near Paisley, May* 2.

EARLY SWARMING.

[1851.] I had a swarm of bees on April 23, and another yesterday, the latter weighing 8½ lb. Is this a good one?—JOHN U. TERSON, *Dover, May* 3.

[Yes. A swarm weighing 8½ lb. is a very good one.—EDS.]

[1852.] I had a heavy swarm from a "Wells" hive to-day (May 1). This is very much earlier than usual in this district.—ALFRED WATKINS, *Hereford.*

FORWARD STOCKS IN SCOTLAND.

[1853.] Grand weather for the bees. Never had stocks in so forward a condition at this time of the year as they are just now. I have twenty-five stocks in capital form.—WILLIAM SMITH, *Kelso, N.B., May* 1.

Queries and Replies.

[1029.] *Giving Naphthaline from the Outside of Hive.*—1. I have a hive of the "Cowan" pattern, and find the inside of roof is always wet with condensed moisture, apparently caused by the heat of the swarm; there are two holes 1 in. diameter in it covered with perforated zinc, should I have other two holes in the back roof? 2. As it is not always convenient to open the hive for the purpose of putting in naphthaline, would it do to cut a hole in the floor-board and cover it with perforated zinc; and put the naphthaline beneath instead of in the hive? The fumes would of course pass upward through the zinc into the hive.—R. G. *Renfrewshire, May* 1.

REPLY.—1. It is always better to have both back and front ventilation in roofs, but if the frames are well quilted down with plenty of warm coverings no condensation of moisture should be found inside a water-tight roof. 2. We must confess our preference for lifting the hive from its floor-board and placing the naphthaline just where we want it on the floor. If, however, a contrivance could be made in the shape of a box fitting close up to under-side of floor-board, and an aperture by which the fumes could ascend into the hive, it would no doubt be very advantageous in many ways. It is a good idea, and we hope our correspondent will carry it out and report how it answers.

[1030.] "*Feeding Back*" *Honey: Estimating a Bee District.*—I have four stocks—two in bar-frame hives and two in skeps. On one of the bar-frame hives arriving, it was found that the queen was dead, so I removed a frame of brood from the other hive, and gave it to them. This happened on April 9, therefore twenty-eight days have elapsed. They have been well fed with syrup, and carry in plenty of pollen. I have not been able to look in the hive since, as the weather has been unfavourable. A short time ago I observed a dead drone on the alighting-board. 1. May I conclude from this that they have a queen? 2. As this stock is weak in bees, would it be advisable to drive the bees from one of the skeps and unite them with it? I have also become possessed of a number of frames containing a great deal of honey, but they are not standard sizes, and the wax is very old and black, so I do not want either the combs or frames. A bee-keeping friend told me to feed the honey back to the bees by uncapping the combs, and placing them about fifty yards from the hives. I did this for two days, but the excitement it caused in the apiary was so great that I feared the bees might start robbing, so I removed them. 3. Is it safe to feed the rest of the combs back in this manner? If not, how?—as the honey is valueless to me, and the

frames will not go in any of my hives. 4. The lower parts of these combs are filled with some substance that the bees do not touch. If pushed out with a pin, it comes away in cup-shaped flakes. It is quite as black as the wax. Will it harm the bees to go on so old a comb? 5. I have round here about thirty or forty lime-trees, and within the mile radius are twenty more, while at a distance of a mile and a half is the finest avenue of limes in Suffolk. Are these last near enough to be any use to me, and are the above-mentioned sufficient to count on for the production of surplus honey? Besides these, our house is placed in a wood of about 300 acres filled with wild flowers, and all around are farmsteads, and heaths covered with whins. But none of the farmers seem to grow white clover, though there is plenty of pasture-land. Would you think from this that there is sufficient profitable bee-pasture for twenty or thirty hives? There are no other bee-keepers near me.—F. R. KENT, *Ipswich.*

REPLY.—1. The fact of the stock being weak and having drones in it rather points to its having been queenless for a long time. The combs must therefore be examined to see if a queen has been raised, and also to make quite sure they are free from disease. 2. If the stock in skep is now doing well, it would be very bad policy to stop their prosperity by robbing it of bees to patch up the weak lot in frame-hive, to say nothing of the sacrifice of brood that might ensue from your inexperience. We judge you to be a beginner in bee-keeping, and as such would do well to refer to "Useful Hints" in our last issue. 3. Safe enough when sufficient experience has been gained to regulate the time and method of doing it, but terribly risky otherwise. The "robbing" trouble will, however, diminish as the season for honey-storing draws near. Meantime you might try the plan of storing the combs in empty hives, setting them outside, some distance from the apiary, and reducing the entrance to a single bee-space. The combs should not be uncapped. If the honey in combs is liquid and good in quality, the "feeding back" should take place when supers are on; to defer it till autumn would not be safe in a novice's hands. 4. No. 5. The district is a promising one for lime-honey if the weather is favourable while the trees are in bloom. Altogether we should judge it, from the description, to be a locality where bees would be profitable in fairly good reasons.

[1031.] *Supering Foul-broody Stocks.*—Referring to my former letter, and your reply, as to a foul-broody stock, a sample of comb of which I sent you, I am sorry to inform you that on examining another of my hives to-day, previous to putting on a super, I find that it is infected with the disease, although by no means so badly as the former one. It is a strong stock, with brood in about seven frames, and this gives me hope it may be possible to save it. The disease does not seem to have taken a firm hold of the stock, or else it has only just begun to show itself, as the affected cells are but few on a comb, and are scattered here and there; in fact, I had examined two or three combs before I noticed anything amiss. Under these circumstances I shall be obliged if you will advise me by answering the following questions:—1. Is it necessary or advisable to destroy the bees and combs? 2. If not, what can be done to effect a cure? 3. Will it be any use to feed with medicated syrup, as honey is coming in, and the bees will probably refuse the syrup? 4. I have naphthaline in every hive, placed there as soon as I knew the former hive was diseased.—W. J. S.

REPLY.—1. No. Moreover, if the quantity of brood which fails to hatch is limited to "a few scattered here and there," and the stock is strong as stated, the case is evidently a mild one, and we should not hesitate to give the super, trusting to the naphthaline on floor-board for keeping down the spread of the disease. The preventive has evidently restricted its ravages, and, in view of warm weather and new honey coming in daily, it is quite possible the stock may do well this summer, while the medicated-food treatment may be deferred till autumn. The above will suffice for reply to queries 3 and 4.

[1032.] *Foul Brood.*—I find we have a very slight attack of foul-brood in our apiary, a thing never before experienced here. The bees are working well, so I ask, would you remove all sections and shallow-frames now on while giving remedies?—H. S. W.

REPLY.—The surplus chambers will not need removing while giving naphthaline on floor-boards, and, if the attack is really a very slight one, as stated, the medicated food may not be necessary, especially if the bees are working well in surplus chambers. See reply to W. J. S. above.

[1033.] *Danger of Cross Fertilisation by Bees.*—I should be much obliged for your opinion on the following matter:—If there were four acres of Swede, and four acres of "Thousand-head" cabbage in bloom at the same time, but one-quarter of a mile apart, would there be any danger of hive-bees inoculating the Swede and "Thousand-head" flowers? This is a matter of great importance to seed-growers in the neighbourhood.—R. T. S., *Rochford, Essex.*

REPLY.—In writing of "Swede" we suppose our correspondent refers to Swede turnip, and if so, then no harm would follow the bees visiting the flowers of the latter after foraging on the cabbage-bloom. In any case, however

the fact of the two pastures being a quarter of a mile apart would reduce the risk of harm from cross-fertilisation to a minimum.

WEATHER REPORT FOR APRIL, 1894.

WESTBOURNE, Sussex, April, 1894.

Rainfall, 2·26 in.
Heaviest fall, ·85 in. on 24th.
Rain fell on 14 days.
Above average, ·81 in.
Max. Temperature, 67° on 7th.
Min. Temperature, 30° on 22nd.
Minimum on Grass, 26° on 14th
Frosty Nights, 1.
Sunshine, 188·2 hours.
Brightest Day, 10th, 13 hours.
Sunless Days, 1.
Below average, 23·4.
Mn. Maximum, 56·7°.
Mn. Minimum, 41·8°.
Mean Temperature, 49·2°.
Maximum Barometer, 30·22° on 29th.
Minimum Barometer, 29·39° on 16th.

L. B. BIRKETT.

ETEOROLOGICAL SUMMARY.

April, 1894.

Locality : Stoke Prior, Worcestershire.
Height above sea level : 225 ft.
Rainfall, 1·61 in. ; heaviest fall, ·3 in. on 10th.
Rain fell on 15 days.
Max. shade temp., 68° on 11th.
Min. temp., 29° on 19th.
Max. shade temp. at 9 a.m., 55° on 2nd and 28th.
Min. temp. at 9 a.m., 36° on 19th.
Frosty nights, 3.
Max. barometer, 30·05° on 30th.
Min. baroneter, 29·15 on 16th and 17th.

On the whole a poor month here for bees. Below the average of sunshine. Several days very dull and cold. No warm genial showers. Winds very variable, but chiefly E.S.E. A rising barometer at close of month. Strawberry and raspberry in blossom. Extended brood nests, but no surplus of honey.—PERCY LEIGH.

Echoes from the Hives.

Beemount, Stoke Prior, Worcestershire, May 4.—May has come in very dull and cold. Winds variable, one time blowing N.N.W., and within an hour the vane points S.S.E. Raspberry and strawberry now in blossom, besides a host of woodland trees and shrubs. On April 29 bees were flying very freely, and from six stocks drones were on the wing. On Saturday I gave a hurried glance into the super crates, but the foundation had not even been touched. The extra frames placed at back of brood-chamber on March 31 were, however, crowded with worker eggs and grubs. I saw only three queen wasps about the hives during April. Wind now blowing a gale from the N.N.W., and extremely cold.—PERCY LEIGH.

THE REARING OF GOOD QUEENS.

Dr. Miller seems to think that a young queen emerging from a cell not less that ten days after the bees commence to give it full attention, ought to be all right, according to the observations of Herr Reepen. It is true that they should be all right, since no doubt the queen and worker larvæ are fed upon the same kind of food up to the fourth day, and, theoretically, at least, they should be as good, but practically they are not. And here we have again an illustration of the difference between mere theory and practice.

Dr. Miller seems to have quite overlooked one very important item, and that is the relative amount of food the worker and queen larvæ receive if designed from the moment of hatching. A queen-larva hatching in a queen-cell in a colony making preparations to swarm, is invariably flooded, so to speak, with the royal jelly, while all larvæ designed for workers are invariably scantily fed at the start, or for the first four days.

Now *my* observation shows that the most prolific, and especially long-lived, queens were abundantly fed during the first four days of the life of the queen-larvæ, and I think I will be fully sustained in this observation by all experienced queen-breeders.

On the other hand, I never saw a good queen that had not been properly fed for the first four days of her life ; and I think I was one of the first, if not *the* first, to rear queens by transferring small larvæ, from eighteen to thirty hours old, to queen-cells well filled with royal jelly after the removal of its occupant. These queens would all hatch on the tenth day after, and would often be large and fine, to all appearance. Still, I never reared one in this manner that was extra prolific and long-lived, and hence I abandoned this way of rearing fine queens, because in developing a new strain of bees, as I have been doing for the past nine years, it became absolutely necessary. The result has been an improved bee, highly prolific, and great workers.

Out of swarming time it is possible to bring about all the conditions for rearing perfect queens as follows :—

Catch and cage the queen of a strong colony full of young bees, and take away all of their brood and give them a comb of honey and empty combs. Place the caged queen upon the frame to keep them quiet.

At the end of three days take away the queen in the evening, and the next morning give them a frame of cells with just-hatching larvæ, on the Alley plan. Not more than twenty larvæ should be given them. Now feed them well for five days. Eggs may be given in the same way, but they will not quiet the uproar in the colony like the young larvæ, and black bees have the singular habit of eating all of the eggs, but will accept the larvæ.

Should a comb of just-hatching eggs be

given to the colony instead of the fifteen or twenty cells prepared on the Alley plan, it will be found in a few hours that every larva in the comb will be swimming in royal jelly, showing that all are fed as if to rear queens, although but fifteen or twenty queen-cells will be completed.

Thus reared, I have many times got queens that lived four years, and were highly prolific to the last. With such queens I have obtained the equivalent of two ten-frame Langstroth hives full of brood by June 10, but the ordinary queen would hardly fill eight Langstroth frames under the same conditions.

Of late there has been some talk of having two queens in a hive in the spring to build up large colonies, but from the above it will be seen that one good queen is enough for any colony.—Dr. G. L. Tinker in *American Bee Journal.*

TRADE CATALOGUES RECEIVED.

W. P. Meadows' Syston, near Leicester.—Mr. Meadows' new catalogue for 1894 (fifty-two pages) is the most attractive list of bee and other goods he has hitherto issued. The illustrations are numerous and excellent, including representations of many interesting novelties for the coming season. It is quite plain that no trouble has been spared to make the list complete and up to date.

T. B. Blow, Welwyn, Herts, 78 pp.—An exceptionally large and well-illustrated catalogue. It goes beyond the usual range of a trade list in general interest, besides including several pages on the management of bees, very useful to beginners. The Ford-Wells hive also is illustrated by some half-dozen specially prepared diagrams, which make clear its working parts. We can well understand the charge of 3d. for this special edition of Mr. Blow's annual catalogue.

Bee Shows to Come.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries close May 31. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries close May 1. Post entries at double fees till May 12. Secretary, John Huckle, B.B.K.A., King's Langley.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

Thos. Faragher (Douglas).—Many thanks for photo of apiary. It is creditable to yourself and gratifying to us to learn that the good-looking dozen or so hives have all been made by yourself "from instructions in the 'Guide-Book.'" Considering what busy men florists and market-gardeners usually are, it is a matter for wonder how you have found time to do so much at bee-keeping and make it a success.

H. S. W.—*The "W. B. C." Section-box.*—Anyone can make and exhibit the above, there being neither patent nor "protection" of any kind attached to it.

M. E. P. (Shrewsbury).—*Robber Bees.*—The "black shiny-looking bee" is a confirmed robber, the others of the same colour being ditto. The black appearance is caused by the pubescence (or hairiness) being torn or pulled off its body in the struggle for booty with the bees of the hive robbed. The "brown, downy-looking" bee is a young one which has never flown.

P. W. S. A. Parsons.—1. It is quite possible that a small piece of healthy brood may be taken from a diseased stock. In fact, it sometimes happens that only a few cells are affected in a whole colony, and yet the disease may be present. 2. The "Bee-keepers' Guide Book" will suit your purpose.

Subscriber (Boyle).—*Honeycomb Designs.*—We can send you a copy of our monthly, the *Record*—wherein appear full particulars of making honeycomb designs—for 2½d. in stamps.

A. Black (Durham).—*Preventing Swarming.*—Give plenty of room, a little in advance of requirements, and wedge the hive up from its floor-board a quarter-inch during very hot weather.

D. McG. (Oban).—*Suspected Comb.*—Comb sent contains nothing but healthy pollen and honey. No trace of disease about it.

Old Reader.—There is foul-brood in comb sent, though most of the dead brood is simply "chilled," and will, of course, develop foul-brood very rapidly if it remains in the hive. Under the conditions described we should destroy all the combs and frames, reducing the stock to the condition of a swarm; they may then have a good chance of overcoming the disease if fed on medicated food until new combs are built. Use naphthaline on all floor-boards.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

FOR SALE, CHEYLESMORE TRICYCLE, or would Exchange for Bees. MASTER, Workhouse, Lichfield. D 83

BEES, NATURAL SWARMS, healthy and strong, free from foul brood, 10s. 6d. each, boxes 2s. 6d. if not returned. E. LONG, Cottenham, Cambs. D 87

STRONG, Healthy SWARMS, 3s. per lb. Packed free. APIARIST, Fairspeir, Ascott-Wychwood, Oxford. D 81

SWARMS of ENGLISH BEES, 3s. per lb. Packing box returned. GARNER, Broom, Biggleswade, Beds. D 82

SECRETARIES of BEE ASSOCIATIONS, apply for tract, "Honey and Beeswax," free. GEORGE STOCKS, Sandiway, Northwich. D 84

OBSERVATORY HIVE, two frames, part mahogany and stained to match, gained first prize with Bees, Derby, 1893, will EXCHANGE for one good STOCK of BEES on Frames or Two Swarms. F. WALKER, Cattle Market, Derby. D 85

A DOUBLE HIVE, Wells System, been used, will carry either Standard or Shallow Frames on Second Storey, will EXCHANGE for a STOCK on Frames or good Swarm. No hives required. F. WALKER, Cattle Market, Derby. D 86

REMOVING.—MUST BE SOLD NEXT WEEK, complete BEE-APPARATUS. 8 miles north of London. Includes 4 hives, 16 to 40 standard frames each (two W. B. C.s'), "Raynor" extractor with cover, 5-section crates, &c. All in first-rate condition. What offers? Separately or lot. H. PERKIN, 50, Mark Lane, E.C.

BEE PLANTS, Limnanthes Douglasii, 100, 1s. 3d. Iceland Poppies, 25, 1s. 3d. Limnanthes Douglasii Seed, 6d. packet. HUNTING, Loddon, Norfolk. D 78

FOR SALE, STOCKS of BEES on Standard Frames or in Straw Skeps. JAS. WEATHERHEAD, Ely, Cambridgeshire. D 77

PURE ENGLISH BEES. Splendid strain Swarms from 10s. 6d., Nuclei 5s. on rail, Queens 3s. delivered. ALSFORD, Expert, Blandford. D 80

FIRST SWARMS of my splendid strain of BEES, which cannot be excelled, 15s. packed free. JOHN WALTON, Honey Cott, Weston, Leamington. D 72

BEES (Carniolan) FOR SALE. Swarms (including box) 22s. each. Ready early in May. Order early. C. MORREY, Five Ways, Neston, Chester. D 76

GUARANTEED HEALTHY NATURAL SWARMS, (Pure Natives), 3½ to 4 lb. each, price 12s. 6d. Packing included. Expected middle May. Orders in rotation. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. D 74

WANTED, SECTIONS of COMB HONEY (any quantity), and HONEY in bulk. State price, &c. Orders also given for coming season. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London. 199

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

STOCKS, NUCLEI, SWARMS, and QUEENS FOR SALE. Address, The Rev. C. BRERETON, Pulborough, Sussex. 192

"YE OLDE ENGLISHE BEE."

PRIME natural Swarms of my selected strain of English Bees, all 1893 Queens, Packing-box, and put on Rail free, price 15s. Address, W. WOODLEY, World's End, Newbury.

Telegrams—"Ilsley, or Hampstead Norris."
Porterage 1s. 6d.

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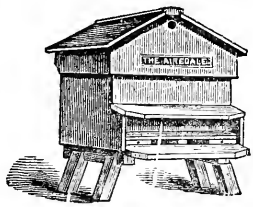

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To be had of the Author only. 206

See large Advertisement first Issue of the month.

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Yes! if you want Honey. Now is the time to learn "How to prevent Swarming" in bar-frame hives, and to "Transfer Stocks from Skeps to Frame-hives." Every bee-keeper should also know "How to make an artificial Swarm" successfully. All these, &c., 3d. only.

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W. RUSHTON, Hive Factory, Bedford. 203

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N.B.—More than 500 Silver and Bronze Medals, First and other Prizes, and Testimonials innumerable.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the committee was held at 105, Jermyn-street, on Thursday, 10th inst. There were present :—Mr. T. W. Cowan (in the chair), the Hon. and Rev. Henry Bligh, Rev. G. W. Bancks, Major Fair, Messrs. H. Jonas, W. B. Carr, W. O'B. Glennie (treasurer), E. D. Till, J. H. New, W. J. Sheppard, Rev. E. Davenport (ex-officio), and the Secretary.

It was unanimously resolved that the Secretary be requested to convey to Mr. Hooker the sympathies of the committee in the serious accident which had befallen him recently, and to express a hope that he may soon gain his usual health and strength.

The Secretary reported that the Royal Agricultural Society would be pleased to give facilities for holding a meeting of bee-keepers in the Show-yard at Cambridge on either the third or fourth day of the Exhibition. The Secretary further reported that the entries for the bee-department of the Royal Show at Cambridge were of a satisfactory character.

The following new members were elected, viz. :—Mrs. E. Cruikshank, Sandridge, Herts ; Mr. H. Seamark, Willingham, Cambridge ; Mr. J. Blyth Clarke, Braughing, Herts ; Rev. A. Jollye, Aslacton, Norfolk ; Messrs. Johnson & Son, Soham, Cambs ; Mr. E. Walker, Erith ; Mr. S. Atkin, Highgate ; Mr. J. S. Fletcher, Ottershaw ; Miss Russell, Upper Hamilton-terrace, N.W. ; Mr. Jas. Goldhawe, Reymerston, Norfolk.

The following corresponding members were also elected :—Miss Gayton, Much Hadham, Herts ; Mr. W. Lees McClure, Lytham, Lancs ; Mr. F. J. Cribb, Morton, Gainsborough ; Mr. R. T. Andrews Hertford ; Mr. A. H. Martin, Evesham.

It was resolved that, owing to the Royal Counties Show taking place during the week ending June 16, the monthly meeting of the committee be held on Wednesday, June 20. Other matters of a routine character were disposed of, and the committee adjourned.

CONVERSAZIONE.

The second quarterly conversazione of this year was held on Thursday, May 10, at 6 p.m., and among those present were the Revs. C. G. Bancks and E. Davenport, Major Fair, Messrs. H. Jonas, H. W. Brice, W. B. Carr, W. O'B. Glennie, E. D. Till, T. F. Leadbitter, J. H. New, W. J. Sheppard, R. P. Wailes, Mr. and Mrs. W. Soar, and others.

Mr. W. O'B. Glennie, treasurer of the Association, presided, and in briefly opening the proceedings called upon Mr. W. B. Carr, who he believed had some novelties interesting to bee-keepers, which he had kindly brought for the inspection of those present.

Mr. Carr said unfortunately the apicultural items with which he hoped to arouse their interest were few in number, but they must make the most of what had been placed in his hands for exhibition. First there was a new swarm-catcher, sent by Mr. Meadows, which, as would be seen, was made entirely of queen-excluding zinc, and was intended to be fitted on the projecting porch of the hive. The producer had endeavoured to make the contrivance to some extent elastic, so that it would suit hives of different widths. The bees in their ordinary work passed through the zinc, but in the act of swarming the queen was captured in the upper portion of the "catcher," and being imprisoned there was found by the flying bees of the swarm, which remained with her there until hived by the bee-keeper. At least, this was the view of the inventor of the contrivance, who, after many trials of different methods of catching swarms, averred that the one now presented had been quite successful.

Mr. Brice suggested what he considered to be an improvement on Mr. Meadows' invention, and at some length explained to those present how he proposed to remove some faults which to his mind existed in the one before them.

During the discussion which followed, Mr. Carr said Mr. Brice evidently desired to do away with the looseness of the elastic part. Of course, if a bee-keeper made the contrivance for his own particular hive, he need not trouble to provide the elasticity. The maker's object was to allow of the catcher being adaptable to any width of hive. It would, no doubt, be easier to remove the swarm by Mr. Brice's method. At the same time, they were told that Mr. Meadows had made a number of experiments before he produced the present article, which he declared was quite satisfactory, and as against that Mr. Brice's system had not yet been tried.

The specimen swarm-catcher was handed round to the members present, and its merits further discussed conversationally.

Mr. Carr next exhibited a "Wells dummy," or perforated divider—also made by Mr. Meadows—with the lower edge of the tin binder so arranged that if there happened to be a slight difference in the depth of hives—as there often was—the bottom edge of the dummy could be raised or lowered at will. The article was passed round, critically examined, and generally approved.

The next novelty shown was a sample of artificial comb made in Germany, and sent by the manufacturer to the Editor of the BEE JOURNAL for inspection and criticism. The sample had been already submitted to the Committee of the B.B.K.A. earlier in the afternoon by the chairman, Mr. Cowan, who was unable to stay for the later proceedings—and it now devolved upon him (Mr. Carr) to bring it before the notice of those present. As would be seen, it was made from beeswax, with cells $\frac{1}{2}$ in. deep on each side the midrib, and was as fully drawn out and complete as

the bees could have made it, although it had never been in a hive or touched by a bee. He thought this a considerable advance in bee-appliances, and it would be difficult to say what the outcome would be if the bees were induced to use it for all their purposes. It had not been tried in this country, but he believed it had in Germany, and no doubt the cost of production would tell heavily against its general use.

A general discussion took place as to the merits or otherwise of the novelty, which created much interest, and it was handed round for inspection, several of those present expressing their intention of making a trial of it, if only for the sake of experiment.

The complete set of lantern slides on bee-keeping, as prepared by Messrs. Newton & Co. for exhibition at the World's Fair, Chicago, from which they have just been returned, were next produced for inspection, and as arranged in a stand and illuminated by means of the electric light, showed to great advantage. They were closely examined, and much admired by all present.

At this stage of the proceedings, Mr. Glennie was obliged to leave, and Mr. H. Jonas, by request, assumed the chair.

Mr. Brice, in compliance with the invitation of Mr. Carr, then explained to the meeting the result of his experiments—as yet incomplete—in regard to queen-rearing on Mr. Doolittle's plan. He had studied with some interest the American methods, although he knew that however successful these methods might be on the other side the Atlantic, the variable climate of Britain was a factor which upset all calculations when the same plans were tried in this country. Mr. Doolittle's plan had struck him most, and he had therefore confined himself to it for several reasons. He had moulded his queen-cells, or "cups," according to the instructions, using a lead pencil as a dipper, and placed them "on a stick" as directed. The stick was then attached to the underside of the top-bar of a frame, the young larvæ—which must be under thirty-six hours old—placed in the cups, and the frame inserted in the hive. He gave the bees six cells prepared in this way on the afternoon of Saturday, the 5th inst., as a first trial, and on Monday evening found three of the six had been accepted, and queens were being raised therein. In fact, he had never seen queen-cells of the same age with such an abundance of royal jelly in them. On the morning of the 9th the three cells were capped over; he consequently removed them, and dividing the combs and bees of the upper chamber in which they were being reared into three compartments, gave a cell to each. Of course he had not seen the queens, for they were not yet due, but he would write a full account of the proceedings to the BEE JOURNAL when his experiments were concluded.

Mr. Carr thought Mr. Brice's experiences would be very interesting to bee-keepers, and he looked forward with pleasure for a more detailed recital, explaining further developments, in the pages of the JOURNAL. In England they had not reduced queen-rearing to such a mechanical process as in America, where it was known they were able to raise queens by the thousand. Personally, his predilections had been towards naturally raised queens, but he could not deny the advantages of the artificial system, if it could be satisfactorily transplanted on this side of the Atlantic.

Mr. Brice said it was necessary to be careful always to place the small larva right at the bottom of the cell to be successful. In his case only three cells were accepted out of six, but that was his first attempt. He made the cells in the same way as an ordinary dip candle was manufactured, the first dip being three-eights of an inch, the next a little less, and so on. When completed they were strong and hard, and pinching made no impression on them.

Mr. Carr said great care must be used in transferring the larvæ, it being necessary in lifting them to get whatever instrument was used well underneath the tiny grub for fear of injuring it.

Mr. Brice agreed, and said he had used a silver toothpick filed down to a flat point. Mr. Doolittle used a quill, but he preferred the former. He ought to say that it was necessary and all-important, before putting the larvæ in, to have a supply of royal jelly on hand, obtained from other hives compelled to raise queen-cells for the purpose. A supply of this jelly is put into each cup at the bottom before introducing the larvæ. Of course temperature was also important when removing the larvæ or it might chill and die. His place was heated up to 85 degrees. He transferred three of the larvæ, and his wife the other three; and it was now a matter of dispute between them as to which was the successful operator (laughter).

In answer to several interrogators, Mr. Brice said that the queen-cells were raised in a full colony with a laying-queen, with queen-excluder between the brood-chamber and the shallow-frame box where the cells now are. He (the speaker) was now carrying out a series of experiments for the purpose of inducing the bees to raise queens from the egg direct. He was endeavouring to discover the egg within a few hours of its being laid, to mark it on the fourth day, and put the royal jelly to it so as to float it on its course. That was a delicate operation, and, probably, several trials would take place before the right larvæ would be taken to. But if it was secured the cell would be sealed by the eighth day. He only made the base of the cells, the bees built them out. There must be at least 1½ lb. to 2 lb. of bees in the part of the hive where a queen was being raised to render success possible; but, once the queen-cells were sealed, everything would go right. Good queens could not be raised in small stocks.

Referring to the question, raised by Mr.

Till, of rearing queens by means of an ordinary incubator, Mr. Brice observed that he had hatched many eggs in incubators, but had stopped short at bees' eggs. It was, however, within the knowledge of several present that queens had been, and were being, reared in this way.

Major Fair exhibited a sample of lime-honey gathered this spring in the island of Montserrat, in the West Indies. This was not the ordinary lime-honey as generally understood, but from the blossom of the tree from the fruit of which lime juice is manufactured. The honey was inspected and tasted by most of those present, the general opinion being that the flavour was fairly good, though peculiar and somewhat pungent.

The last of the objects of interest shown was in the nature of a curiosity which, Mr. Carr explained, had been sent to the BEE JOURNAL office by Colonel Hughes-Hallett, who was at present stationed with his regiment at Gibraltar. It was a small branch of the loquat tree, whereon a swarm of bees had clustered and at once began to build combs. It was only after being hived again and again in a frame-hive that the bees were at last induced to remain therein, and cease returning to the tree, and give up their work of comb-building there. The pieces of comb attached to the leaves of the branch submitted for inspection were partly filled with bright-coloured pollen, apparently showing that breeding was intended in the open, and thus affording another illustration of the saying that "bees do nothing invariably."

The further proceedings had reference to the use of honey labels by county associations, and a general conversation upon the subject ensued, the prevailing opinion being in favour of the adoption of labels by all county associations.

A very enjoyable evening was then brought to a close in the usual way.

STAFFORDSHIRE BEE-KEEPERS' ASSOCIATION.

The annual meeting of the Staffordshire Bee-keepers' Association was held, by permission of the Mayor of Stafford, in the Guildhall, on Saturday, the 28th ult. Col. F. D. Mort was voted to the chair, and amongst those present were the Rev. A. R. Alsop (hon. sec.), the Rev. J. D. Glennie, Messrs. E. Clowes, T. Cooper, E. E. Crisp (hon. treasurer), J. R. Critchlow, G. Farrington, W. Stendall, E. W. Turnor, H. E. Twentyman, W. Williams, H. Wood, members of the committee; Robert Cock, J. Greensill, J. H. Collier, J. Pellington, Thos. Walmesley, jun., E. Gould, A. Goldsmith, E. Pitt, G. C. Price, Mrs. Alsop, Mrs. Critchlow, Miss Stubbs, &c. The Chairman said he had every reason to believe that the report which would be submitted was a most favourable one, and would show that the association during the past year had accomplished excellent work, and was in a very flourishing condition, both financially and otherwise.

The report, as read by the Secretary, was adopted, after which that gentleman expressed his wish to retire from the secretaryship—while willing to retain his place on the committee—and to propose the name of Mr. Harold Twentyman as his successor. This was agreed to, with an expression of the thanks of the committee for Mr. Alsop's valuable services in the past.

The treasurer submitted the financial statement, from which it appeared that the expenditure had been £22. 12s. 2d., leaving a balance in favour of the association of £15. 4s. 7d. after defraying a deficit of £10. 3s. on the Lichfield Show account. The accounts were passed, and a vote of thanks was accorded to Mr. Crisp for his able conduct of the financial affairs of the association. The next business was the election of officers. Mr. A. H. Heath was unanimously re-elected president, and the committee were re-appointed with the addition of Messrs. R. Cock and J. H. Collier to the list. Mr. Harold Twentyman was elected hon. secretary, and the auditor (the Rev. J. D. Glennie) and hon. treasurer were re-elected.

The general business having concluded, Mr. Cock delivered an address on "Bee-keeping," after which the proceedings terminated in the usual way.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of April, 1894, was £2,100.—From a return furnished by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see* 1st *page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

WORLD'S FAIR APIARIAN FACTS AND RESULTS.

[1854.] Bee culture was well represented at the great Columbian Exposition. Besides an immense amount of honey of different kinds, of both comb and extracted, all the

mechanical appliances necessary in the art of modern bee-keeping were on hand from different countries; also beeswax, artistically moulded, in a great variety of forms, as well as honey-cakes, honey-vinegar, honey-wine, and other honey-drinks.

Seventeen States of the American Union made apiarian exhibits, while about the same number of foreign countries participated in the display of nectar. The largest exhibitors were New York, Illinois, and the Province of Ontario, Canada. The two states named had the largest quantity of comb-honey, while Ontario had the largest amount of extracted honey. With the exception of Great Britain, which showed a fair quantity, other foreign countries than Ontario had comparatively small exhibits. Nor was the quality at all equal to the Ontario honey and that from some of the American States and Great Britain. Besides Great Britain and Canada, the foreign exhibitors in the apiarian line were Italy, Greece, Russia, Spain, Siam, Ceylon, Costa Rica, Ottoman Empire, Germany, Hayti, Brazil, Mexico, Guatemala, Ecuador, Argentine Republic, and Venezuela.

About seventy awards in all were made in the apiarian department. These were apportioned about as follows:—The seventeen States of the Union, 40; the Province of Ontario, Canada, 17; and all other foreign countries, about 13.

The United States, Canada, Great Britain, and Germany no doubt lead the world in the science and art of apiculture, as well as in honey production. The Linden honey of Ontario, Canada; the clover honey of the United States and England; and the heather honey of "Auld Scotia" stand at the head of the world's most delicious sweet, viz., honey, which, as displayed at the great World's Fair, was fit for gods and men or angels and women.

Most of the honey at the Chicago World's Fair was disposed of at the close of the Exposition. Ontario sends a consignment of the choicest of her World's Fair exhibit to the Antwerp Exposition in Europe to open in May.

The North American Bee-keepers' Association held its annual meeting in Chicago in October, and, as might naturally have been expected, was the largest and most successful meeting the association has ever had in the twenty years and upwards of its existence. Not only were the United States and Canada well represented, but bee-keepers from across the ocean were present. Professor Wiley, of the Agricultural Chemistry Department at Washington, was present, and delivered an address on "Adulteration." Professor Riley, of the Department of Entomology, was also present one or two sessions.

Bee culture, as a legitimate branch of agriculture, is gradually assuming the important position to which it is fairly entitled. Grain exhausts the soil, as also does stock more or less. The ultimate source of honey is the atmosphere. The vegetable kingdom secretes and stores up a surplus of nectar from "the heavens above" exceeding its requirements. The bees gather the surplus nectar and convert it into honey—the best, most wholesome and palatable of Nature's sweets. Instead of being a luxury merely on our tables honey is becoming a staple article of food. Between the two oceans, in the United States and Canada, millions of pounds are now produced annually, and other millions are "wasted on the desert air." There is room for a much wider extension of the industry, and the World's Fair must inevitably give impetus to such development and extension.

You will have heard ere this, probably, of the death of Mr. S. Corneil, of Lindsay, Ontario, secretary of the Ontario Bee-Keepers' Association, and for many years in official connection with the society. In his death Canadian bee-keepers have sustained a great loss. In apiculture, both as a science and an art, he was well posted, and was one of our ablest writers on bee culture in America.—ALLEN PRINGLE, *Selby, Ontario, April* 27, 1894.

THE TWO-QUEEN SYSTEM.

THE SEASON IN THE "FYLDE" DISTRICT, LANCASHIRE.

[1855.] Since the two-queen system has been brought so prominently before the notice of bee-keepers, I have, like many others, taken great interest in the reports, articles, &c., that have appeared on the subject from time to time in the BEE JOURNAL and *Record*. I have also started a "Wells" hive, in order that I might find out for myself its merits or demerits. Many I'm afraid, nay, know, have commenced hives on this plan, believing it to be a thoroughly tried and firmly established system, by means of which they were, if not going to make their fortunes, at any rate going to achieve results in honey-getting anything between 25 and 50 per cent. more than from any two hives on the ordinary plan. Hence, I suppose, Mr. W. B. Webster's article in May *Record* warning beginners and others not to rush into the system headlong, but to wait a bit and see. I am afraid, however, it comes rather late, though it may act as a good deterrent hint to many, even yet. I do not want it to be thought that I am crying down the double-queen system or its originator; by all means give honour where honour is due; but let us hear reports from those who have tried the plan and carefully watched it. Thus the opinion of the majority will be got, and that will probably be very near the truth, which is what we want, and should have, before the practice of the system is recommended universally. With this object, I will now give my experience and impressions up to date, trusting that others will follow.

Firstly, with regard to wintering, I found that the bees did not cluster close up to the perforated dummy, but about the centre of each division.

Of course, breeding commenced in the centre of each cluster, and spread, as far as I could see, equally in both directions, so that a few days before writing there was no brood on the frame next the perforated dummy in either division. (I re-arranged the brood-nest, putting the centre comb of brood next the dummy, and so on, thus making the dummy the centre of the common brood-nest, which is as it should be, I believe, in theory.)

From this it will be seen that, in this case at any rate, the additional warmth from the clusters being together was not obtained, neither did the spring breeding benefit from the same; in fact, the two stocks acted just as two stocks in separate hives would have done.

If this occurs in every case, then the system loses its most valuable point; for, if it does not help—and very materially—in wintering and spring breeding, I myself fail to see its value (for any system almost will get lots of bees in summer), and that the simple fact of having a common super over the two stocks will increase the honey yield, as it is said to do, seems to me rather a phenomenon.

I think the vitality of the system lies in the points I have mentioned, and should like to hear other reports on the matter, and shall be glad to report further results at the close of the season. So far the stocks in the double hive are not one whit better than others under exactly the same circumstances in single hives, and in some cases not so good.

I should like to see the matter thoroughly ventilated for the large cumbrous hives, additional care and difficulty in manipulating needed and trouble likely to be experienced with swarms, which are some of the drawbacks of the system; need I think a somewhat certain and substantial recompense, and the hives I opine should not be generally adopted till such time as the matter is placed on a more sure footing. And this will be when we have heard a little about the failures as well as the successes, which latter, I may say, I have not heard much of in this district. The weather here recently has been blustering and wet. We had a very fine spell commencing about April 1, or little earlier, during which stocks came on rapidly, and it appeared to be going to be another 1893. Things, however, suddenly changed, and our bees found themselves with somewhat large families and little capital or income, hence we heard of drone brood being cast out in several instances, and even of hatched drones being turned out of the hives to perish. Several stocks that I have seen in this neighbourhood were quite without stores and needed feeding, and my own bees have had the syrup bottle on for more than the past week, although, as I write, (May 12) sycamore, hawthorn, chestnut, and some apple trees are in full bloom. (This, however, is not a well-wooded district.) It, however, shows signs of clearing up, and I trust that the bad spell is over. White clover is our sheet anchor, and we are looking forward to a good time early in June.—Benj. E. Jones, *Freckleton, near Preston, Lancs.*

FOUL BROOD AND RE-QUEENING.

[1856.] Having been troubled for several years with more or less of "foul brood," I venture to suggest if bee keepers were to turn their attention more to the raising of young queens, we should not hear so much of the dreaded disease as at present. Instead, however, as a rule, bee-keepers are all for the prevention of swarming, and so it goes on year after year until we get queens that, being old and worn out, lay eggs of diminished fertility; and, from these eggs the bees raise their queen after superseding the old one to go on again through the same routine, only still worse, till we have a queen of no quality whatever, except what is bad. We thus have brood and bees of a weakly race far more liable to infection than if the bees were of a first-rate stamina and quality. I would like to ask your readers if ever they have failed in stamping out foul brood after giving a young queen from a healthy stock with clean combs to start with again? I have been reading up Bee Journal of 1887, which contains a great number of letters on the subject, but I cannot see anything of a definite character as regards a cure for foul brood. In my humble opinion, aged queens have more to do with it than a good many are aware of, and if you prevent swarming you must adopt a regular system of queen raising, so as to keep up the supply of young and vigorous mother-bees if you are to be freed from this bee-keeper's pest.—"South-West," *Sussex.*

Queries and Replies.

[1034.] *Transferring Bees and Combs.*—As a beginner in the craft I would value your advice as to what is best to be done under the following circumstances:—Yesterday I moved a stock of bees after dusk from a place about a mile away. These had appeared to me a strong stock, and I risked, perhaps foolishly, some of the older bees returning. They were carefully handled, conveyed by train the short distance, and, it being about eight p.m., I attempted at once to transfer them to a "Gayton" hive. Their original domicile was a sort of travelling box, covered with perforated zinc, which had, however, all the perforations completely plugged with propolis. On raising the zinc I found that it was firmly fastened down by the bees, and when removed—through there having been no dummy added

to the seven frames—the empty space behind was occupied with brace and cross-combs. These gave way and fell, breaking about half of the two adjoining inside frames, and doubtless half-drowning the bees with honey. Some of the frames have metal ends, some no ends at all; so that on placing them in the new hive last night, and moving them together this morning, I had to judge distances by my eye partly. I added one frame of my own with full sheet of foundation, and on leaving home for town this morning the bees were partly in each hive. Those in the "Gayton," where the frames are, seemed the quieter, the others having buzzed up angrily when I raised the lid in order to look at them. For want of daylight I could not see either queen, brood, or honey, except what little of the latter was spilled outside; and although it was nearly dark during the time my "operating" was in progress, very few bees were killed or injured, so far as can be seen, outside; but the original box must be a mass of broken honeycomb from the bits of the two frames, and all the brace-combs. I have not tried to give the bees any food, but only wrapped them up as warmly as possible, and am very anxious to know what I ought to do next, whether to leave them alone or feed them, or attempt to finish transferring by driving the remaining bees from original box and adding them to the others. At present the box and the hive stand close together.—EDWIN H. WILSON, *Beckenham*.

I should add that the former owner had kept these bees for two years, just as they were given to him in the box, without handling them or being able to secure any honey from them. Several swarms, however, had issued during the time.

REPLY.—It is quite certain that the queen is in the "Gayton," and the bees in box will probably have joined her before this appears in print. If they have not done so, we should contrive some means of giving the bees access to the box from below, and then, after providing a feed-hole in quilts of frame-hive, set it above the frames so that the bees may rejoin their queen; and if the honey in damaged combs is uncapped they will soon carry it below.

[1035.]— *Unfertilised Queen.* — Will you please tell me what to do under the following circumstances? One of my stocks has raised a new queen, which was hatched out more than a week since. I examined the hive a week ago to-day and saw two or three drone-cells but no drones. I also saw the empty queen-cell, from which I presume the queen had hatched. To-day I again examined the hive, and saw two drones had hatched since I last looked at them; there was no eggs in the combs, and only about a dozen or so of worker bees left in the combs to hatch out from sealed cells. I also saw the young queen going over the comb, narrowly looking into each cell, as if anxious or about to commence to lay, and I do not think there are any drones in my other hives, as I have seen none on the wing yet, and as I cannot see any information in "Guide Book" as to the best thing to do, I write for your advice. 1. The bees cover nine frames. The past week or more the weather here has been dull, very showery, and cold, which did not give the young queen much chance to fly. Do you think the queen will become fertile all right, or would you advise me to get a fertile queen and introduce at once? 2. Do queens often commence laying before being fertilised? 3. Whatever you may advise me to do, I propose taking two empty combs from them, and put in two frames of brood from another hive, to keep the population up. Will not this be a wise step to take?—W., *Dorset, April* 12.

REPLY.—1. The queen will most probably be laying all right in a day or two. 2. Not unless hatched at a time when drones are not in existence. 3. If the other hives are strong enough to spare frames of brood without bringing their population down appreciably, only good will follow. Otherwise will it not be "robbing Peter to pay Paul?"

[1036.] *Swarms from "Wells" Hives—Helping Beginners.*—I thank you for reply to my query (1027, p. 178) in JOURNAL of 3rd inst., and beg to say that on Saturday last I walked along with a friend on to the allotments where my "Wells" hive is kept—just to see how all was going on, and if the swarm of the previous week was all right—when my attention was called to some bees apparently gathering in the hedge. On my friend and I going up to the spot, to our surprise, we saw a swarm as large as one's head, in the middle of a thick hedge. We got a pail, and after carefully cutting away branch by branch till we could get at them, succeeded in securing the bees in our pail without much trouble, and then hived them in the hive from which they had decamped last week. They settled down very quietly, and all went well. I then thought I would look at my "Wells" hive, and in the side that had always been the strongest, prior to the swarming, I found two queen-cells had recently been opened; but there seemed to be no brood, nor did I see the queen. I then looked into the other compartment of the hive, and found the ten frames crowded with bees, and plenty of brood in all stages. I was at a loss to know whether it was best to return the swarm we had just hived to the broodless part or to give the latter a comb of young brood. Eventually, I took the latter course. The bees were very excited and evidently meant war, but I could do nothing, so left them for the night. Next day my friend advised me to super the strongest side, as he feared the bees wanted room. I therefore

covered the weakest side with American cloth, placed the queen-excluder on the other, and put on the sections, giving access to them only to the bees of the strongest side, and shutting the weakest lot out for a time. I may mention that where the swarm had clustered the bees had commenced to build comb. 1. Do you think it possible for those bees to have been there for the whole week unnoticed, or had they returned to the hive again and swarmed once more afterwards? In such a case, what would you have done? I am pleased to say that both swarms are now doing well, only, in the part of the "Wells" hive that swarmed last week, the bees have taken nearly two pints of syrup, yet we do not yet see any signs of brood. 2. Is it too early to expect to see brood yet?—W. R. Traviss, *Willesden Green, N.W., May* 6.

Reply.—1. We think there is little doubt that the bees removed from the hedge on the 5th inst. constituted the second swarm from the "Wells" hive. It is also probable that there would be sealed brood and also a young queen in the swarmed portion of the "Wells" hive, but they have escaped your notice. 2. Seeing that the young queen would only be just hatched when the swarmed hive was examined, there could be no brood from her, but some of the progeny of the old queen would be still unhatched at the date named in the parent hive. As we have frequently had occasion to remark of late, beginners, who desire to become bee-keepers, cannot expect to make satisfactory progress in their work without the aid of a guide book of some sort on the subject, wherein all such points as are involved in the above queries are made clear, and the reasons why fully explained. It is like groping about in the dark to be ignorant of such elementary details as how long an interval takes place between the laying of the egg to the hatching out the bee, be it queen, drone, or worker; also about the issue of swarms, casts, mating of queens, and such like. Our correspondent seems to possess all the aptness needed to make a bee-keeper if it is guided aright, and for this he needs a *book on bees.*

[1037.] *Dealing with Foul-Broody Stock.*—A few weeks ago I examined my four stocks of bees and found them all except one in good condition; but the one in question I found rather weak, and to be suffering from what I at first thought to be foul-brood, but on a second consideration concluded it was chilled. However, I took the precaution of removing all the brood and gave a frame of foundation, and, on examining a fortnight later, I was surprised to find that the queen was a drone breeder. So not wishing to unite the bees to another stock, as I still feared foul-brood, a week later I removed the queen and inserted a frame of brood and eggs from a healthy stock, and hope to have drones flying in time to fertilise the young queen, which I found them to be rearing yesterday. But, still finding the brood of the late queen to be diseased while that in the frame which I gave seemed healthy, I concluded that it must be foul-brood. I then transferred the stock into a clean hive, removed all the affected brood from them, gave a comb of honey, and placed a bottle of syrup on. The bees at present cover five frames. I herewith send you a piece of the comb and brood removed yesterday, and will be glad if you will kindly answer the following questions:—1. Is enclosed foul-brood or only chilled? 2. Is it possible for a fertile queen to become a drone breeder? or, 3. Is it more likely that they have lost their queen, and the bees have raised another which, owing to the absence of drones, could not be fertilised? 4. Do you think that the bees can make themselves strong in time to take advantage of the honey-flow, say in June or July, if they succeed in raising a queen and she becomes fertilised?—John Cuthbertson, *May* 14.

Reply.—1. Comb is affected with foul-brood. 2. Yes. Aged and worn-out queens frequently produce only drones. 3. In this case we think it most likely the queen had not been superseded, but was old. 4. The chances are rather against the stock yielding surplus honey this year, seeing that so long a time must elapse before the queen hatches, becomes fertile, and produces bees fit for gathering honey in sufficient numbers to take to surplus chambers.

[1038.] *Remedying "Spoilt" Bee Food.*—I herewith send you a sample of honey which has been boiled in the comb, mixed with fermented syrup, boiled again with water, and I am afraid spoilt! I have about 80 lb. of it. I shall be much obliged if you will let me hear through your paper whether it is safe to use it as bee food?—P. W. S. A. P., *Tunbridge Wells, May* 8.

Reply.—If a pound of sugar is added to every three pints of the syrup, the latter being warmed (not boiled again) sufficiently to melt the sugar, it would do as summer-food for swarms, or for stocks short of provisions. But it would not be suitable for autumn feeding. We must confess to certain doubts as to sufficient care being exercised generally in our correspondent's *modus operandi* or plan of operating. The syrup has a flavour which gives the idea of its being over-boiled, or half-burnt, in a pan placed in direct contact with the fire, instead of being simply melted in an inner vessel plunged into a pan of hot water. Far too much water has also been added, and, finally, we must be excused for saying it was *not* considerate to ourselves to send a 1 lb. jar of syrup in a loose tin box without even screwing on the cap of jar, so that his letter had to be washed well before being readable.

[1039.] *Bees Killing Drones in April.*—I bought a hive of bees last autumn; they

appear healthy, and are working well. On the 18th of last month and three following days they killed and carried out a large number of drones, some of them being not fully developed. Can you inform me why drones should be killed so early in the season? It is my first experience with bees.—'NOVICE," *Wrexham, May* 10.

REPLY.—When a change for the worse happens in the weather during springtime it is quite a common occurrence for drones to be cast out, especially if food is running short in the hive. They are supposed to be killed off by the bees because of the untoward condition putting a stop to all idea of swarming, and the consequent necessity for drones.

[1040.] *Destroying Foul Brood Combs,—Re-Queening.*—I enclose a pieee of comb from a hive, the bees of which have dwindled very much. 1. Will you kindly tell me if it has foul brood, hnd if so, ought I to destroy the frames of clean empty combs that are in the hive? 2. What sugar is the best to feed bees on, the raw brown, or white loaf, or what kind? 3. Should I remove the old queens from three of my stocks and replace them with queens from casts, or would you advise me to wait till the end of the season?—A MAN OF KENT, *May* 11.

REPLY.—1. Comb is badly affected with foul brood. We should burn all frames and combs containing brood, and melt the other down for wax. Putting the bees to death would also be a merciful proceeding, since a weak lot of foul-broody bees are worthless and dangerous to keep. 2. Refined cane sugar is the only kind suitable for bee-food. 3. Unless the queens are unprolific, we should defer re-queening until the honey harvest is nearing its close.

THE "CASE FOR THE BENEVOLENT."

Referring to the appeal made on behalf of William Martin, who was desirous of obtaining for his daughter admission to the Earlswood Asylum for Idiots (see BEE JOURNAL, April 19, 1819 p. 153), Mr. John Walton writes :—

"I received a letter a day or two ago from friend Martin, informing me that his daughter was successful in obtaining admission into the asylum, for which he is most thankful."

EARLY SWARMS.

The following reports of early swarms have been received since our last issue :—

KENT.

The Rev. F. T. Scott, of The Cedars, Hythe, Kent, writes that he had the first swarm of bees in his apiary on Saturday, April 28. This is the earliest time in the reverend gentleman's forty years' experience as a bee-keeper. Another swarm is reported from Bonnington on Monday, the 30th ult.

NORTHANTS.

Mr. Geo. Page, of Holcot, Northants, who has kept bees for upwards of twenty-two years, had a swarm on Sunday, April 29. Last year he was fortunate enough to secure one swarm in May, but this year he beats the record. We are also informed of another early swarm at Helmdon. The bees belong to Mr. Hopkins, and the swarm issued on May 1.

WARWICKSHIRE.

On Tuesday, May 1, Mr. Joseph Russell, manager for Messrs. Kay & Company's lime-works, Long Itchington, Warwicks., had a large swarm of bees.

WESTMORLAND.

Mr. Burton, of Wood Heads, Grange, near Kendal, successfully hived his first swarm of bees on Saturday, April 28. Though the weather was certainly very fine on that day, it is something like record-breaking as regards date in this locality.

THE USES OF HONEY.

A correspondent forwards a cutting from the latest issue of *Tit-Bits* in which a writer, under the *nom de plume* "Honey is Money," says :—

"For some years I have been a great believer in the plentiful use of honey, both as a valuable medicine and as an invigorating food. In this country we suffer very greatly from foul air, improper ventilation, and sudden changes of weather, which cause no end of throat and bronchial troubles. Before I used honey my family were frequently laid up with sore throats, and rarely free from various forms of chest complaints.

"Since, however, I have made use of a plentiful supply of honey in my household I have found these ailments almost entirely vanish. Good butter is most wholesome, but in these days of adulteration it is very difficult to procure. Honey is a most desirable and economical substitute for it, and, as a rule, is less than half the price. Since honey was introduced into my household, my cook has used it for quite a number of different purposes. It may be used to replace sugar in almost every article of food, and in the making of light puddings the flavour of honey is much more delicious.

"In former years I was wont to use sugar for preserving a large supply of fruit which was kept for winter use, now I use honey, and find that fruit keeps sweet very much longer, and that, while sugar preserves become stale in a short time, honey preserves never do so. For children, a liberal use of honey is really in-

valuable ; and since I began to use it I have not spent a shilling on doctors' medicines, whereas formerly I used to spend a good many.

"My wife discovered a remarkable use for honey quite recently. After being out at a theatre and coming home late, she was wont in the morning to look jaded and faded, her skin becoming dry, red, and harsh-looking. One night she tried the effect of rubbing gently a thin coating of honey on the face before going to bed. The result was surprising, and almost tempted me to set up in business as an imitator of the renowned Madame Rachel, who became famous by making ladies beautiful for ever. Honey is one of the finest cosmetics in the world, and can be safely recommended to all ladies—and gentlemen, too, for that matter — who wish to preserve a beautiful complexion.

[After the above, bee-keeping should certainly look up, for, if true, it goes to show that "honey" is not only "money" but a good many useful things besides.—EDS.]

TRADE CATALOGUES RECEIVED.

W. Bazeley, Sheep-street, Northampton.—48 pp. Another excellently-got-up catalogue, though many of the illustrations seem familiar. Besides bee-appliances of all kinds, and several items and methods of dealing to which special attention is invited, there are included several pages interesting to naturalists, taxidermists, and microscopists.

E. J. Burt, Stroud-road, Gloucester.—24 pp. A well-arranged, if not very pretentious, list of bee-goods, containing only useful things for the apiary.

Bee Shows to Come.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries close May 31. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries close May 1. Post entries at double fees till May 12. Secretary, John Huckle, B.B.K.A., King's Langley.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, sec., Castle Douglas, N.B.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances. Liberal prizes. Entries close June 29. S. Upton, secretary, St. Benedict's-square, Lincoln.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** *We are compelled to hold over "Useful Hints" till next week.*

R. BAYLEY (Plymouth).—*Early Honey.*—The honey sent is very fair in flavour and aroma, excellent in colour, and to have been taken so early in the season is certainly a good sample. It is from the various fruit trees lately blooming.

I. F. T. (Cambs.).—There is assuredly fou brood in comb sent, though only apparent in a very few cells. The sealed brood is chilled, but the chilling has occurred some days ago, all the unsealed larvæ being plump and healthy-looking as could be. Have you naphthaline on floor-board of the hive?

J. W. CHALMERS (Greenock).—*Packing Bees for Transit.*—Leave the scrim, referred to on p. 175, entirely uncovered, unless the bees are uncared for on the journey and likely to be exposed to rain or cold.

J. F. R. AYLEN (Capt. R.N.)—Many thanks for photo of your neat little "Town Garden Apiary." The hives, home-made though they be, are good-looking structures, with not a little of the solidity of the "R.N." about them, and reflect much credit on yourself as the maker. We are very pleased to learn that the bees with you are a success.

GEO. DALE.—*Foul-Brood.*—Comb sent is very badly affected with foul-brood. Since you have the "Guide Book," but "have no time to attend to the directions therein," it is difficult how to advise you, except to say the combs should be taken away from the diseased stocks and burnt without delay If the two diseased stocks are weak, we should join both lots, and after giving them a clean hive feed with medicated food while they are furnishing it with new combs. Put naphthaline on floor-board of all the hives.

MRS. PORTMAN (Wimborne).—*Immature Brood Cast Out of Hives.*—The carrying out by the bees of white and immature drones like that sent may be safely regarded as a result of the adverse change in the weather, which has stopped income, and for the time put an end to the preparations for swarming, which the raising of drones is always a forerunner No further harm will follow unless food is short, in which case the bees should be fed a little.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

NEW Double or Single Walled STANDARD FRAME HIVES; high roof, large eke, moveable floor, on legs; 10s., worth 15s. Crate (24 sections in), 2s. C. MERREY, Five Ways, Neston, Chester. D 89

BEST GRANULATED WHITE CLOVER HONEY; 240lb. at 6½d., or offers. APIARIST, Fairspeir, Ascott-Wychwood, Oxford. D 90

HEALTHY SWARMS, 3s. per lb.; 1893 Queens. Packing free. LEMIN, 72, Hoe-street, Walthamstow, Essex. D 88

WANTED, SWARMS or STOCKS, and empty Bar-Frame HIVES. Exchange Honey Extractor and American Organ, 16 stops. WILLIAM PARSONS, Esq., Ashurst-place, Langton, Tunbridge Wells. 217

SCREW-CAP HONEY BOTTLES (English). Bags of 10 doz., 12s. 9d. each. Packing free.
Sheffield Steel UNCAPPING KNIVES. Keen-edged and thin. No hot water needed. Post-free 3s. each.
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GUARANTEED HEALTHY NATURAL SWARMS, (Pure Natives), 3½ to 4 lb. each, price 12s. 6d. Packing included. Expected middle May. Orders in rotation. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. D 74

FOR SALE, CREYLESMORE TRICYCLE, or would Exchange for Bees. MASTER, Workhouse, Lichfield. D 83

BEES, NATURAL SWARMS, healthy and strong, free from foul brood, 10s. 6d. each, boxes 2s. 6d. if not returned. E. LONG, Cottenham, Cambs. D 87

SWARMS of ENGLISH BEES, 3s. per lb. Packing box returned. GARNER, Broom, Biggleswade, Beds. D 82

SECRETARIES of BEE ASSOCIATIONS, apply for tract, "Honey and Beeswax," free. GEORGE STOCKS, Sandiway, Northwich. D 84

BEE PLANTS, Limnanthes Douglasii, 100, 1s. 3d. Iceland Poppies, 25, 1s. 3d. Limnanthes Douglasii Seed, 6d. packet. HUNTING, Loddon, Norfolk. D 78

PURE ENGLISH BEES. Splendid strain Swarms from 10s. 6d., Nuclei 5s. on rail, Queens 3s. delivered. ALSFORD, Expert, Blandford. D 80

FIRST SWARMS of my splendid strain of BEES, which cannot be excelled, 15s. packed free. JOHN WALTON, Honey Cott, Weston, Leamington. D 72

WANTED, SECTIONS of COMB HONEY (any quantity), and HONEY in bulk. State price, &c. Orders also given for coming season. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London. 199

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

STOCKS, NUCLEI, SWARMS, and QUEENS FOR SALE. Address, The Rev. C. BRERETON, Pulborough, Sussex. 192

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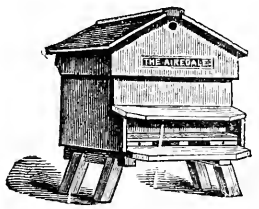

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Editorial, Notices, &c.

USEFUL HINTS.

Weather.—The best and worst that can be said of the weather as we write is that it still continues good for agriculture, but rather bad for apiculture. Yet how slight is the dividing line which prevents it from being equally good for both, seeing that a change in the direction of the wind is all that is wanted to make rapid honey-storing a certainty. Bee-forage seems everywhere abundant, sunny days have been frequent, with just sufficient rain to make things grow nicely, and yet bee-keepers are complaining; not without reason either, for supers, though full of bees, are not being filled with honey. The wind for some days past has been northerly, varied only by an occasional veering to the east, which is still worse, and, so long as it keeps there, we must wait, and hope, and feed the bees if needful. To-morrow all may be changed and honey coming in fast, but just now, as the old fisherman said, "The wind's agen us, an' it's no kind o' use fitin' it."

The paragraph above was written on the evening of the 19th. On the following night six degrees of frost was registered in our part of Kent, and this morning (21st) passing through the fields on our way to train for town, what a sight was presented to view! Whole fields of potatoes, before looking full of promise for a fine crop, completely blighted, the haulm blackened and dropped to the ground, as if a plague had passed over the land. The loss to farmers must be very severe.

Management of Swarms.—The frequency with which swarms have been reported during the last two or three weeks makes it safe to assume that many of the new colonies will be in a bad way if not fed. It is in such precarious times as the present that a few pounds of food is of the utmost importance for newly-hived swarms to keep them in good heart pending a change for the better in the weather. In view also of the return of warm weather, further swarming may be expected and should be prepared for, not only by getting hives ready for swarms, but the after-treatment of swarmed stocks should be thought out and a plan of proceedure resolved on beforehand. A few makeshift hives are always useful to have in stock, especially when they are so constructed as to be readily adapted for nuclei.

Bees Casting out Brood. — Some alarm has been created of late in the minds of correspondents — who are beginners—by their bees casting out of the hives a considerable quantity of pupa or immature brood. This generally happens with strong stocks, and, as a rule, is a sign of impending scarcity in the food department; but sometimes drone brood is thrown out while food is plentiful inside the hive, and, in the latter case, indicates nothing more serious than that the adverse change in the weather causes the bees to give up preparations for swarming for the time, and the poor drones suffer in consequence. The trouble first referred to is remedied by giving a few pounds of thin syrup, while the drone-killing will be given up as the weather becomes more favourable.

Fixing Foundation in Hives.—We were not a little surprised when, at the *conversazione* of the B.B.K.A. the other evening, several beekeepers present confessed themselves entirely ignorant of the fact that there was a wrong and a right way of hanging sheets of comb foundation in frames and sections before placing them in hives for the bees' use. That the question has not cropped up before is, to say the least, curious, nor should we have raised it ourselves now because of taking it for granted that the frequent opportunities afforded to bee-keepers of handling and observing combs built by bees without the help of foundation would enable them to know almost by intuition how a natural bee cell is built. The question, however, arose during the discussion which took place on the occasion referred to with regard to the sample of artificial comb mentioned on p. 191 of our last issue, and we are glad to have the opportunity of here making the matter clear, because it is quite certain that a sheet of foundation is far more liable to sag or give way when set wrong way up in the hive than when properly fixed. Without entering into the question of the marvellous instinct displayed by the bee in fixing upon the nearest approach

to mathematical accuracy — so far as utilising space—in the formation of its cell, it will be apparent to any one capable of realising the simple architectural value of an arch for strength, that, if left to itself, the bee secures this important advantage by constructing the cell with a pointed arch for its roof, and the side walls resting on the apex of the roofs of the two cells immediately beneath, as shown in Fig. 1. With the expenditure of a minimum of material it thus secures a maximum of weight-bearing strength for its delicately-formed little store-house. On the other hand, if the bee-keeper carelessly, or inadvertently, or ignorantly gives to his bees foundation so hung that the cells are built with side walls not vertical, as in Fig. 1, but diagonal with the lines of roof and floor horizontal, as in Fig. 2, obviously the comb is considerably less calculated to bear weight without sagging, and is deteriorated in consequence. A very brief study of the above diagrams will so fix the outline of the cells in the memory that no bee-keeper need make a mistake by hanging foundations in frames other than right way up.

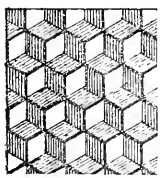

Fig. 1.

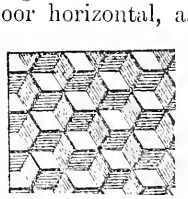

Fig. 2.

TO OUR READERS.

Owing to an an unexpected demand for last week's number of the BEE JOURNAL the whole of the edition is sold out, and several applicants for copies have been disappointed in consequence. Deeming it likely that some readers —who do not preserve their JOURNALS for reference—may attach no value to them after being read, we will be very pleased to have such returned, if of no use to their owners.

BEE SHOW AT CANTERBURY.

The first important bee show of the present season takes place at Canterbury on the 12th and three following days of next month, in connection with the Royal Counties Agricultural Show, and we would remind readers of the number and liberality of the prizes offered for competition, as well as the fact that entries close on the 31st inst. Mr. Huckle, King's Langley, is secretary of the bee department, and will supply schedules to all applicants.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of Advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1857.] A fortnight has passed since I last wrote, and there has been no improvement in the weather. In the apiary things are very quiet, hives that had every appearance of swarming a few weeks back are now as clear of bees around the entrances as they generally are in March and April. The wind—"cold enough to strip a feather," as our Berkshire folk-lore has it—still blows from north-east. The nights are frosty, and tender vegetation is cut off, while by day the skies are cloudy with occasional glimpses of the sun; and so the month rolls on, favourable, no doubt, to the farmer, but not to the bee-keeper and gardener. I notice some colonies are throwing out immature drone-brood; where anything of the kind is seen food is promptly given, and generally stops the slaughter.

If we had got a continuance of good bee weather we should this year have been in the middle of the swarming season; but, owing to the continued cold spell, we cannot now be much earlier than in ordinary seasons. There is and has been a good breadth of forage, the bulk of it lost to us this time; still, we must hope on, though "hope deferred maketh the heart sick." I hear of early swarms that have been many days building small pieces of comb which in good warm weather is usually done in as many hours.

Our editorial answers prove that foul-brood is still with us in various parts of the country, therefore I venture to give Mr. W. McEvoy's method of cure for the benefit of all who are unfortunate enough to get the disease in their apiary. Mr. McEvoy has in a recent number of the *A.B.J.* answered the criticisms of his method which has appeared during the past winter in the American bee papers, and then closes a somewhat long article with his method

of treatment, which, he says, has proved a radical cure of the disease in so many apiaries in Canada :—"Where there is only a little of the disease in many colonies and most of the brood is sound, I would, in the *evenings* in the honey season, remove all the brood-combs from the *strongest colonies*, and give them starters. I would then cage the queens in the weaker colonies, and tier up on them the brood I took from the strongest colonies, and leave it there for eight or ten days. I would then remove all the combs from these colonies, and give the bees starters, and let the queens out of the cages, and either make wax of the combs, or, better still, burn the lot at once. I would remove the starters from *every* colony at the *end of four days*, and give every colony full sheets of foundation. *Do all the work in the evenings*, and either make wax of all the new combs made out of the starters during the four days, or burn them as soon as they are taken from the bees, then the cure will be complete."

The McEvoy treatment of the disease is plain and practical, and at small cost. The principal one is the cost of frames and foundation to replace the old ones, which should be burnt; but even here there is the advantage of having new combs in all the colonies, which will enhance the well-doing of the colonies for the following years. At any rate, the system is worthy of a trial, and if (though Mr. McEvoy says there are no ifs in the matter)—yet, I repeat, if the method is a cure let us be ready to give honour where it is due.

Does Mr. Meadows' swarm-trap hold the swarm till the queen is released, or does it act as a guide to a hive ready to receive the swarm? If only a swarm-trap, the bee-keeper would require to visit the apiary every day, and if it was far from home the journeys and "traps" would cost as much as a "watcher." The present season will probably give opportunities for testing the various devices, yclept swarm-catchers or self-hivers; but the different styles ought to be tried under one management, and in sufficient numbers to put each kind to a practical test. On this line our American cousins are far before us with their experimental stations and farms.—W. Woodley, *Beedon, Newbury.*

SWARM-CATCHERS.

SUGGESTED IMPROVEMENTS IN CONSTRUCTION.

[1858.] With reference to the appliance shown at the conversazione of the British Bee-Keepers' Association on the 10th inst., and my remarks thereon alluded to in your report on p. 191, will you allow me to say I have in use, in my apiary, several arrangements intended to fulfil the same purpose as that of Mr. Meadows, and I would like to offer a few suggestions by which the article, as at present constructed by that gentleman, might, in my opinion, be much improved. Mr. Meadows' swarm-catcher may be efficient in its working, but it lacks rigidity, which would, without the greatest care, cause the loose parts to get misplaced, and so, by blocking up the perforations in the zinc, it would fail just when it should succeed. The parts I do not like are, first, the sliding or overlapping front, which, being in the centre of the hive exit, would, even if properly fixed, hinder the bees somewhat when leaving and entering the hive, whilst if not exactly adjusted would stop egress and ingress altogether where the parts overlap. Second, the shape of top chamber, and the necessity of shaking a swarm out at one end, and that a small one. I cannot quite see how the apparatus is to fit perfectly close all round so as to prevent the queen leaving for a certainty. I therefore suggest the following alterations :—1. That wooden sides be made to fit close down to the hive sides with a thumb screw on each side to fix it in its place. 2. That the perforated zinc front be one piece of metal, and firmly nailed or fastened to the wooden sides. 3. That the top chamber, formed by a plain metal half-back carried at an acute angle between the wooden sides to meet the triangular piece—forming the passage by which the queen enters the upper chamber—be carried up and over such triangular piece, leaving only sufficient room for a queen or drone to pass, but extending, as his now does, right along the line. 4. That the upper chamber be fitted with a perforated zinc lid, easily removable. 5. That the triangular piece before mentioned should, instead of being triangular, be carried straight down until it meets the slanting perforations forming the lower part of the front. The benefit of this would be that, instead of the queen wandering about under the present wooden triangular piece, she would run up the slope, and, finding no exit, would continue to ascend straight into the upper chamber. I have also found that a strip of wood—fixed to the alighting-board and brought up level to the lowest holes in the excluder zinc—placed along the front of the appliance is a great assistance to incoming bees, as there is then no struggling up the piece of metal running along the flight-board before the bees can enter the hive.

The advantage of an easily removable lid is that when the queen and swarm are in and on the upper chamber one can easily take the whole apparatus from the hive to which it is affixed, go to the new hive, move the lid off, and lay the whole concern down on the flight-board, when the bees and queen will soon enter the home prepared for them, without shaking or jarring of any kind.

I think that the appliance as altered is the basis of the swarm-catcher of the future. It also serves the purpose of a drone-trap, and the drones can be easily released—if wanted—or destroyed. In releasing the drones at this time of the year one need not be troubled about their future welfare, for on finding that they cannot enter the hive of their birth they make

tracks for the nearest hive that is open and are readily received. If the drones can be removed in this way it does not require me to tell readers that it reduces the chances of swarming. With hives having movable porches no difficulty would be experienced in adjusting the appliance; but otherwise the bee-keeper must devise some means of adapting the appliance to the fronts of his hives.—H. W. BRICE, *Thornton Heath, May* 16.

AN EARLY SWARM,

AND OTHER BEE ITEMS.

[1859.] A friend of mine, living at Perry Barr, near here (Birmingham), has had the earliest swarm I have ever heard of in the Midlands. It came off on April 24! Six days later the old stock sent off a cast, and two days after this a third, or "colt." His only other stock swarmed May 1. This is a cold district, and our average time for swarms is the middle of June. If it be true that "A swarm of bees in May is worth a load of hay," what would that swarm be worth? Not so much, perhaps, when we consider that they have had to be fed ever since to keep them alive. To-day, May 20, it is bitterly cold, and snowing a little as I write. All hives are killing mature and immature drones, although they have been fed daily.

It is a sad sight at any time to see brood cast out, and, if a result of starvation, must cause the old sister bees many a pang to have to do it. There are other causes, however, beside starvation, for brood may be killed by careless "spreading," and I have known sudden cold spells of weather compel the bees to leave some uncovered in untouched hives, so that it died. I have also known bee-keepers make artificial swarms—making three stocks out of two, &c.—and hives thus denuded of all their flying bees have afterwards cast out much brood, beside many bees born deformed, owing to cold in the pupal, or malnutrition in the larval state. These things speak for themselves, but there are other causes which I cannot explain, except by the theory that bees in their babyhood may be troubled with convulsions, measles, whooping-cough, &c., and so go the way of all flesh. And why not? Why should every bee-egg come to be bee-chickens?

I see at last we have the long-promised artificial comb (not that we want it)—and it comes not from Minnesota either. What will happen now? Will my poor bees ere long forget how to make those delicious cells? Shall we raise bees that will not swarm?—those troublesome but dear swarms—as Minorca and Hamburgh hens have forgotten how to sit. What with honey (?) made in America, comb in Germany (?), and an invention which I am going to make (not to be behindhand!), the poor bees won't know where they are!

My invention will be a device fixed on to the mowing machine. The clover and all flowers among the grass—what a multitude there are!—will pass through this device, and the honey will be extracted from them in their passage. The invention of sugar gave the hive-bee a knock from which it has scarcely recovered, but the above device will be a settler. How delightful to be able in years to come to go into a shop and say, "A penn'orth of mignonette honey, please!" for we shall grow it by the acre then solely for this machine.

Ordinary brood foundation is an expensive item in a large apiary whose owner will have straight combs. On the score of economy we have used foundation, wired, ten sheets to the lb., and, by getting it worked out in April between fully-built combs, have not had a mishap. Our idea is that the apiarian ought to be a producer of wax, but so far we have not found a way since the old skep days. I can't understand the ways of those in the appliance trade. Many of them cut the foundation scarcely wide enough, yet too deep, for the standard frame, and super-foundation is made too small to get eight squares to fit standard sections. As the great majority use the standard sizes, why do they not cut it to fit? Another grievance is the wretched metal caps sold with honey bottles. They appear to be made of soft lead, and are of no use after being screwed on and off occasionally. I have day-dreams of getting 1,000 lb. of honey this year, even by the old-fashioned system of collection by bees' tongues into bees' comb. This said honey will want neat bottles with strong screw caps. What obliging bottle merchant will make one—if for no one else—for LORDSWOOD?

"WELLS" HIVES.

[1860.] As I am constantly receiving letters asking advice *re* above hives, will you kindly allow me to say, through your columns, that until larger "takes" of honey are recorded by their use, I fail to see much advantage to the honey producer. It appears to me the manufacturers are the people who benefit most from them at present. The simpler the hives are the better. The "Wells" hives are cumbersome, and there are many disadvantages in having two colonies under one roof. While I can get from 100 lb. to 162 lb. (without touching the brood-chamber) with very simple hives I shall be quite satisfied with them. This is what they gave me last season, and I hear of similar amounts being taken by others. Much more depends on having a good, young queen than upon the hive.—C. BREERETON, *Pulborough, Sussex.*

BEES FIGHTING AMONG THEMSELVES.

[1861.] I had this spring a similar case to that described in BEE JOURNAL of May 3, (1833, p. 173), of bees fighting amongst themselves. It began on March 24, and on that day, and also the 25th and 30th the front of hive on the ground was thick with bees which

had been killed. This was in excellent bee weather, and the bees had not been disturbed. The queen is all right, and it is now one of my best stocks. I can give no explanation of the matter. Weather here bitterly cold, the sun has hardly been visible for nearly a week. Bees casting out drones and drone-brood. There is abundance of blossom of all kinds, best I have seen for years, so hope soon to have better weather. Stocks are all ready for supers, but have to feed to keep them alive just now.

I enclose two bees from this hive above mentioned, kindly say to what race they belong.—Hy. Marr, *Rosewell, Midlothian, May* 19.

[Bees are hybrids of the usual type.—Eds.]

THE DOUBLE-QUEEN SYSTEM.

THANKS TO MR. WELLS.

[1862.] I beg to thank Mr. Wells for his very courteous reply (1841, p. 183) to my open letter addressed to him. I wanted to ascertain several things, which he has (to my mind) satisfactorily answered. — John Walton, *Weston, Leamington, May* 21.

Queries and Replies.

[1041.] *Trapping Queens for making Artificial Swarms.*—I endeavoured to make an artificial swarm on Saturday, the 12th inst., but was unable to find the queen, so I placed two frames of eggs and brood in the new hive, hoping the queen might be on one of them. I feel certain, however, from the appearance of the bees that she is not there. 1. Will the bees, if left to themselves, re-queen? And will this prevent the old stock swarming? 2. Will the plan mentioned in a back number of the B.B.J., of "sifting the bees through a drone-trap," be of any use for finding the queen? 3. If I place a drone-trap on the entrance of hive, and allow the bees to swarm naturally, will the trap retain the queen, so that I can make an artificial swarm the following morning? I ask this as I am away from home during the day.—A. Vigor, *Ramsgate, May* 15.

Reply. — 1. We fear you have not thoroughly grasped all the points to be observed in making an artificial swarm, and to attempt such operations without that knowledge is to court failure. Anyway, we cannot properly advise on this query without knowing what position—with regard to the original stand — the swarm and stock respectively occupy. 2. We have some recollection of a plan of sifting bees through excluder zinc to find the queen, but not through a "drone-trap." Can you refer us to the B.J. in which it appears? 3. With most of the drone-traps used there is always the risk—when the trap is left on all day—of mishaps through the perforations becoming blocked up with the bodies of the unfortunate drones trying to get out. Some risk also attends the queen when imprisoned in the same way. If, however, some such trap as is described on p. 203 is used, the queen might be caught and dealt with as proposed. But, after all, it is so easy and so much simpler to watch for the queen when "driving," we wonder at the failure to see her.

[1042.] *Queen unable to Fly with Swarm.*—I have read your valuable Journal for the last few years, and learnt heaps of good things therefrom; but I am puzzled to know the cause of enclosed queen not being able to fly from the hive after coming out with a swarm. She only got a short distance, and dropped to the ground. The swarm came off on Sunday, the 13th inst., between ten and eleven o'clock. I only got to the apiary in time to see the bees returning to the hive, and noticed something was wrong by them hunting over the front of hive and on the ground for their queen. I found her surrounded with a bunch of bees, and, getting her into a cage, kept her warm till the bees had got over their excitement, then put her on floor-board, and she ran in pleased enough apparently. The swarm came off again on Monday, and on searching I found the queen below the back of the hive outside, with a bunch of bees as before. So I got her away, and send her on for your opinion. The hive has on a rack of twenty-one sections crowded with bees, and honey is being stored in the sections. I should like the queen returned if she is likely to be of any good to me. I took a swarm for a friend yesterday, and the queen seemed disposed to act as mine did, getting under the floorboard, but after hiving they were all right.—Lansdown, *Bath*, May 15.

Reply.—Queen reached us dead, though the worker bee was still alive. She has probably met with some injury to her power of flight when the hive was being manipulated. In no other way can we account for what occurred, as her wings seem perfect.

[1043.] *Dealing with Foul-Brood.*—I forward in box a piece of comb which I suspect to be foul-broody. I had no idea whatever of its presence until Saturday, when I had occasion to put the bees into a new hive. I had noticed the stock weaker than the rest for some time, but foul-brood never once entered my head, as I have never had the slightest experience with it, or seen it under any circumstances. I fancy from what I have read time after time this is a genuine case; and if so, what is the best course to take with the rest of my hives, eighteen in number? I promptly destroyed the bees from which I took the piece of comb, and I have removed combs and all to a place apart until I hear

from you. My idea is to melt down the combs (I suppose they can be still used for wax), and boil or scald the frames, hive, and all fittings; then disinfect with a weak solution of carbolic acid, or anything better which you might suggest.

I have a terrible dread of the spread of the thing, and I have no reason to believe it is or has been in the neighbourhood; but in the meanwhile, what is the best course to take to prevent its spreading, or to cure it, should any of my other hives be affected? Apparently there is not the least sign of the pest. I never had the stocks as strong in bees as they are at present, at the same period. They are covering generally ten and eleven frames, with eight and nine frames packed with seemingly healthy brood from top to bottom, and working splendidly during fine days. Lately I have been following a course of stimulative feeding, and as the bees in the infected hive have taken a considerable quantity, and very little now present in the combs, I am afraid pilfering has been going on, and the pest may have spread. My inquiry resolves itself into this :—1. What ought I to do with the infected hive? 2. What method of procedure ought I to take with remaining stocks? I do not want to dally with it, but stamp it out if possible.—J. J. K., *Westmoreland.*

Reply.—Comb received is undoubtedly affected with foul-brood. All combs with brood in them from the infected hive should be burnt, frames and all (not melted for the wax). The broodless combs may be melted down, and the wax used for household purposes. 1. For disinfecting the hive, wash well with *hot water* in which a good teacupful of common washing soda has been dissolved. When well dried, paint inside and out with a solution of *soluble phenyle*—two teaspoonfuls to a quart of water. The phenyle can be had from any chemist for 6d. 2. Use naphthaline on the floorboards of all the other hives without delay, and if any feeding is required, medicate the syrup with the napnthol beta that you have by you.

[1044.] *Fish-Glue for Securing Foundation in Sections.*—Kindly inform me whether you consider the taste of honey in sections is affected *in any way* by the foundation? I have cut my foundation to the size of the sections, and am told that the taste of the honey will suffer in consequence, and toughness in eating be the result. I should like to have your opinion. 2. Supposing I fix in the foundation with liquid fish-glue—is the effluvia enough to prevent the bees going up?—B.W., *Barnstaple, May* 17.

Reply.—1. If the best and thinnest make of super foundation is used there will be no appreciable difference in eating between it and that of natural comb, and in any case the quality of the honey will not suffer. 2. We should not use fish-glue or anything having an offensive effluvia in fixing the foundation. Why not use melted beeswax?

[1045.] *Making Artificial Swarm from Skep.*—I have a stock of bees in a straw skep, which I want to transfer into a bar-frame hive. I have six or seven frames of comb, standard size, drawn out. Would it do to drive them this month? I thought they would perhaps do well, having the comb already drawn out for the queen to start laying in. Reply in next issue will oblige. I have read reply to 936 in Bee Journal for January 18, p. 29, but you mention about having a swarm first, and I don't intend mine to swarm at all.—T. Mead, *Birkdale, May* 17.

Reply.—No harm would come to the swarm if driven this month under the conditions stated, but the brood left in the skep after the bulk of the bees had been removed would probably suffer if the weather was not settled and warm at the time.

[1046.] *Bees Dwindling.*—Can you tell me what has been the matter with a stock of bees I have turned out of a skep to-day? It was a natural swarm of last summer, purchased in July. The skep was then quite full of combs and honey, and I placed it as it was in a hive that had not been lined. It did admirably until February, when I found the bees were dying in large numbers. I then commenced to feed with barley-sugar and syrup. The mortality soon ceased, they strengthened again, and did well. I continued to feed, and six weeks ago put a rack of sections on the skep. Since then the swarm has dwindled. On driving them into another skep to-day, and adding them to another stock, I looked into their skep, and found it entirely full of beautiful golden-coloured comb, and very little honey indeed. But what surprised me was that though I had seen no queen, I found three queen cells, in two of which there were large white grubs quite alive and sealed up—one had a live bee inside with it. There were only about one dozen other cells with very young brood in them, and the number of bees driven could not have exceeded 1,000. I should like to know (1) what would have happened if I had left the skep alone? Also (2) if the queen cells prove the presence of a queen? (3) the cause of dwindling? I found no dead bees in the hive. I have just commenced with an apiary of twenty hives, and am purchasing swarms to fill them. There was not the slightest evidence of foul-brood in the skep, or chilled-brood.—Annone, *Ashbourne, May* 18.

Reply.—There are several things which, as described, are incomprehensible to us; and so we must confine ourselves to queries enumerated. 1. If the queen-cells were normal, and contained queen pupa, no doubt

one or more queens would have hatched out from them. 2. Queen-cells and no eggs in the combs generally go to prove the absence of a queen. 3. It is just possible that putting the sections on without carefully packing the junction—and at a time when there were not bees enough in the skep to warrant giving more room—may have so reduced the temperature as to put a stop to breeding, and so cause dwindling. We trust our correspondent will carefully read up a good book on bees before entering upon the management of so many as twenty stocks.

[1047.] *Bees Deserting Foul-Broody Hives.*—I am sending by this post a piece of comb taken from a neighbour's hive, who had only two stocks, which were strong and all right, with plenty of stores in the autumn, when I took the super off. When I opened them to-day there was not a bee, except the one enclosed, in either hive, and from ten to fifteen lbs of honey in each. I should like to know if it is foul-brood? My own opinion is, the tom-tits have killed all the bees.—J. H. W., *May* 19.

Reply.—Comb sent is badly affected with foul-brood. It is little short of a marvel to learn that the bees have deserted the diseased hives—leaving only one dead bee behind (which, by the way, happens to be a queen)—and the honey left is not cleaned out by other bees. Any way, we trust you acted promptly on advice sent by postcard, to close hives at once, in order to prevent robbing. The honey may be used for household purposes, but if got at by bees, it will spread contagion wherever it is carried to. Brood-combs and frames should be burnt, and hives disinfected before using again.

[1048.] *Bees and Skep wintered above Frame-Hive.*—On June 2, 1893, I wished to transfer a skep of bees and honey to a bar-framed hive, but as it was a late swarm of 1892, and, consequently, the combs very tender, I did not attempt it, but placed the skep (which had a fair quantity of both honey and bees) on the top of the frames filled with foundation. It remained there without interference until yesterday, when a friend and myself drove the bees and removed the old queen; we then threw the bees in front of the hive and let a young queen run in with them, and then, after placing excluder zinc over the frames, returned the skep in order that the brood may hatch, when I shall remove it, and in due course give shallow frames. Now as no honey was taken last year from them and five hives close by yielded an average of 60 lb. from surplus chambers, I naturally expected to find plenty of honey, but this was not the case; there was a little in the skep, and the frames were not worked out at all. Will you kindly tell me (1) what was the cause of this scarcity of honey; (2) why did not the bees work on the frames below; (3) whether the plan I adopted was right? I may mention that I never noticed any robbing either last year or during this spring.—A. P. J., *Norfolk, May* 19.

Reply.—1. The fault would appear to lie with the queen unless the stock is diseased. 2. Because of there being room enough in the skep for their requirements. 3. You do not say if the bees were numerous; and, if not, placing excluder zinc between skep and the unfurnished frame-hive may cause the bees to pass into the skep to care for the brood therein while the queen is left below to perish.

[1049.] *Transferring Bees from Skeps.*—On May 1 I put a strong stock in a skep above the bars of a frame-hive—*i.e.*, the skep on to seven frames fitted with foundation. 1. How soon is it probable that the foundation will be worked out, and the queen and bees have gone down from the skep, so that I should put the queen-excluder on top of frames? 2. Why are the bottom bars of frames made so slight? Why should they not be, say, $\frac{1}{4}$ in. thick, as wiring couldthen be so much better done? 3. Has *papier-mâché* been tried for foundation? Will not bees take to it if coated thinly with wax? It would be strong, and not need wiring.—Aliquis, *Solihull, May* 19.

Reply.—1. We cannot well fix even a probable date for the bees taking possession of lower hive, it varies so. But why do you propose to put excluder between the skep and frame-hive? There is no need for this. Moreover, if it is done, there may be drones in the skep which will want releasing. 2. The strength of bottom bar was determined on when the standard frame was established; but frames may be had with strong bottom bars from any maker. 3. No; *papier-mâché* has not been tried for the purpose to our knowledge, though wood has, and was not found to answer.

[1050.] *Making Artificial Swarms.*—In making an artificial swarm from two stocks of bees, as spoken of in your monthly, the *Record*, how will the bees in No. 1 hive receive the flying bees of No. 2, when put on No. 2 stand? Will they not fight?—W. F., *Staffs.*

Reply.—No. Carry out the instructions given, and all will go well.

[1051.] *Extracting Wax.*—Will you kindly tell me how to manage my refuse comb, cappings, &c., as I do not understand how to render it fit for use as beeswax? I may add that I have only a few hives, and hardly require a proper wax-extracting machine.—L. Clews, *Birmingham, May* 18.

Reply.—Several homely contrivances for extracting wax have been described in past numbers of the Bee Journal. But perhaps the most simple and inexpensive way is to fill

a pan to within a couple of inches of the top with the combs, cappings, &c., and just cover with water, place it on the fire, and as the wax melts and rises to the surface skim it off into a vessel of cold water. Be careful the wax does not boil over into the fire. We should add that there is a simple wax extractor on the market which only costs about half-a-crown or so, and does its work well.

Echoes from the Hives.

Ufford Heath, Stamford, May 14.—Until the 10th we had no rain of any consequence, and, as the good effects of that have gone, the bees are now nearing starvation-point. I am obliged to feed a little, as four stocks had begun to throw out pupa. There have, however, already been several swarms in the neighbourhood. Refering to the new perforated dividers for sections, I have used such for years. Mine have holes large enough for the bees to pass through, and they answer capitally.—J. R. Truss.

Bee Mount, Stoke Prior, Worcestershire, May 16.—Yesterday morning one of my stocks in a frame hive swarmed, and settled upon the trunk of a damson-tree, covering the surface for nearly a yard in length. After vainly trying to secure the swarm by the means of a feather and then by smoking, I determined to brush them off into a skep; this I did, and got not a few stings for my trouble, and about two hours after I successfully hived them in a frame hive. Weather here this Whitsuntide has been on the whole cold, dull, and wet. Sunday, Monday, and Tuesday were, however, fairly fine during the early morning. The artificial swarm I made May 1 is doing splendidly. I have, of course, been liberally feeding it, seeing the weather is so unfavourable. Dutch clover, limes, peas, and broad-beans now in blossom. Unfortunately there are not sufficient limes about here to give a surplus. Great number of drones daily cast out.—Percy Leigh.

Honey Cott, Weston, Leamington, May 18, 1894.—I have only had two swarms as yet, and the weather is very tantalising just at present. We have had scarcely any sun, but several thoroughly wet and very cold days, the temperature this morning being only 64 deg. Everything looks grand if we can get some warm weather. The hedgerows are white, with miles of hawthorn in full bloom; the meadows and clovers look beautiful, affording a great variety of bee forage. All we want is old Sol to favour us more and this beastly east wind to disappear, or to change to south, and then we shall have lots of honey. —John Walton.

Wylde Green, Birmingham, May 18.—The echoes from my hives are loud and ceaseless—a cheerful, happy hum-humming of the little inmates. Honey is coming in fast from the many flowering trees, such as chestnut, hawthorn, sycamores, &c. My hives are well situated, as there are so many honey-yielding trees and plants close around. An avenue of lime-trees which partly overshadow them will find plenty of occupation later on, as well as the clover-fields. Sections are already sealed over on a hive which contains a '92 "after-swarm," and which so far has proved the most profitable of all my hives. Even the heavy rain which fell almost ceaselessly yesterday did not daunt the courageous little mites, who braved the elements most defiantly. I never saw bees so strong and active; and they seem to have no intention of swarming, but are crowded in the sections instead, to my intense satisfaction, as hitherto I have had more swarms than honey. I helped to hive an immense swarm on Tuesday last very successfully. The bees marched into the skep like a troop of soldiers. It was very funny. I hope all "echoes" may be as pleasant as mine.—(Miss) L. C.

Romford, Essex, May 21.—I took ten finished sections, and left fifteen others nearly finished, on two hives two miles from here on the 18th inst., but since then it has been bitterly cold. Yesterday (20th) we had hail, and at night a severe frost, and the potatoes are very much blighted.—Wm. Loveday.

Bee Shows to Come.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries close May 31. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries close May 1. Post entries at double fees till May 12. Secretary, John Huckle, B.B.K.A., King's Langley.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, sec., Castle Douglas, N.B.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances. Liberal prizes. Entries close June 29. S. Upton, secretary, St. Benedict's-square, Lincoln.

June 7 and 8.—Wilts Agricultural Show at Devizes. The Wilts Bee-keepers' Association will attend as usual. No prizes. For particulars apply to W. E. Burkitt, hon. sec., W.B.K.A., Buttermere Rectory, Hungerford.

June 13 and 14.—Essex B.K.A. at Colchester. Entries close May 29. Post entries at double fees. Fifteen open classes. Hon. secretary, F. H. Meggy, Chelmsford.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

W. Williams (St. Briavels).—1. The old comb received affords no clue as to foul brood or otherwise. A piece containing some indication of brood in the cells must be sent before we can say anything as to its condition. 2. Subscriptions to Bee Journal can commence from any date, and the paper will be delivered by post on Thursday morning.

An Enquirer and Beginner. — Bees are hybrid ligurians, and are considered fairly good honey gatherers. The queen is an adult, but we cannot tell her age other than saying that she bears no appearance of age or infirmity.

D. Storrie (Perthshire).—Lee's patent frames and sections are manufactured solely by Neighbour & Sons, 127, High Holborn, London, W.C. Porto Rico sugar is not known or sold by any other name to our knowledge. It is not much used now as food for bees.

R. G. (Renfrewshire).—*Confining Queen to Hive to Prevent Swarming.*—We do not see how the proposed arrangement would work. You cannot confine the queen to the hive without confining the drones also, and this latter leads to complications of many kinds. It is well-nigh impossible to manage bees only seen once a week without having some one near to hive a swarm if it should issue.

Morris Jones (Llanafan).—*Raising Queens by Bees taken from Chimney.*—If several queen-cells are started, leave them all in, and let the bees themselves settle which is to head the stock.

A Beginner (Bromsgrove).—*Time a Swarmed Skep is Queenless.* — The young queens usually hatch out in about eight or nine days after the issue of the first swarm.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

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GUARANTEED Healthy Natural SWARMS, ready for delivery, 3½ to 4 lbs. each, price 12s. 6d. Packing included. 1s. each allowed for boxes returned. Address, C. Whiting, Valley Apiary, Hundon, Clare, Suffolk. E 2

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NEW, Double or Single Walled STANDARD FRAME HIVES; high roof, large eke, moveable floor, on legs; 10s., worth 15s. Crate (24 sections in), 2s. C. Morrey, Five Ways, Neston, Chester. D 89

HEALTHY SWARMS, 3s. per lb.; 1893 Queens. Packing free. Lemin, 72, Hoe-street, Walthamstow, Essex. D 88

BEES, NATURAL SWARMS, healthy and strong, free from foul brood, 10s. 6d. each, boxes 2s. 6d. if not returned. E. Long, Cottenham, Cambs. D 87

SECRETARIES of BEE ASSOCIATIONS, apply for tract, "Honey and Beeswax," free. George Stocks, Sandiway, Northwich. D 84

WANTED, SECTIONS of COMB HONEY (any quantity), and HONEY in bulk. State price, &c. Orders also given for coming season. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London. 199

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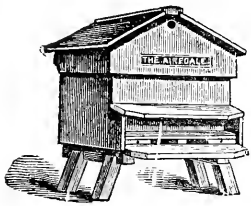
See large Advertisement first Issue of the month.



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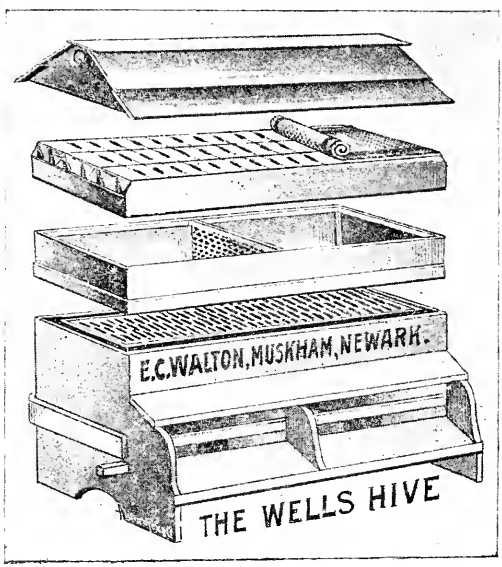

Editorial, Notices, &c.

A NIGHT'S FROST!

A good deal of natural disappointment is felt among bee-keepers because of the very adverse character of the weather during the last few weeks, and the consequent money loss to all concerned in the pursuit through the enforced idleness of bees while the untoward weather conditions existed. In this connection bee-keeping takes its place and its chance among other industries entirely dependent upon favourable climatic conditions for ensuring success; and no amount of scientific or of practical skill can contribute one iota in the way of warding off failure if the favourable conditions are lacking upon which everything depends. If we could change the current of the wind, for instance, what would it not mean to those watching and waiting for the secretion of nectar in the flowers which may, perchance, be blooming everywhere around? Fortunately, however, we cannot turn it an inch to the right or to the left, strive as we please; we say fortunately because one may well wonder what would happen if such a power were placed in the hands of human kind.

We are led to these reflections, first, from the tone of our unpublished bee-correspondence of late, and, second, from having witnessed the effects of a few hours' frost on vegetation and the agricultural interest between the night of the 20th and the morning of the 21st inst. If one can feel for the bee-keeper, whose otherwise willing workers are passing their time in enforced idleness because, like Poe's raven, they "can't get out," what shall be said for the loss to farmers, fruit-growers, and the more humble dependents on the produce of the land when we hear of a "grower" in Kent who, referring to the strawberry crop alone, declares that, instead of employing a hundred "pickers" this year, he will hardly find work for twenty-five, and that this means a loss to him of many hundreds of pounds! During that few hours of "six below freezing," fruit, early potatoes, hops, peas, dwarf-beans, and all tender field-crops received an enormous amount of damage which nothing can repair. Moreover, the loss will fall on a large portion of the village-dwellers in counties where field-work is so largely relied on for the income of the labouring classes.

We look upon the loss—in many cases only amounting to disappointment—to bee-keepers as the merest trifle compared with what has been and will be incurred by the classes to which we have referred. Agriculture has suffered, no doubt, from a very untoward month of May, but when we gazed upon what might be called the devastation caused by that single night's frost it made us feel for the big troubles of the farmer and labourer, and forget the so very much smaller ones, by comparison, of the bee-keeper. *We* can "pull up," if weather suits; our willing bees only await the sunshine and the warmth to give us a good harvest yet; but for the others, the effect of that frost will be felt for a long time to come.

OXFORDSHIRE AGRICULTURAL SOCIETY.

ANNUAL SHOW—HONEY DEPARTMENT.

The annual show of the above society was held at Wallingford on the 23rd and 24th inst. Unfortunately, the first day of the exhibition opened inauspiciously, being cloudy and cold, and during afternoon rain fell for some time, so that the attendance of visitors was somewhat diminished on the opening day, when we were present. The honey department of the show very palpably showed how little honey had been secured in time for showing. A fair number of entries had been made, but only a limited proportion of the exhibitors were able to stage their produce, and so the display was necessarily a small one.

Owing to some misapprehension, an exhibit of three shallow combs of honey, shown in a glass case, was staged in the class for glass super of comb honey, and being the only exhibit in the class, the judge (subject to the approval of the show committee) awarded a second prize to it.

Mr. W. B. Carr officiated as judge, and made the following awards:—

Class 105 (glass super of honey): Second, W. H. Drinkwater, Thame.

Class 106 (six 1-lb. sections): First, W. H. Seymour, Henley-on-Thames; second, W. H. Drinkwater; commended, Spencer Hancox, Oxford.

Class 107 (extracted honey, not less than 4 lb.): First, W. H. Seymour; second, C. Anstey, Granport, Oxon; commended, A. D. Woodley, Caversham.

Class 108 (beeswax, not less than 4 lb.): First, S. Hancox; second, H. W. Seymour; commended, A. D. Woodley.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see 1st page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

THE "WELLS" SYSTEM.

[1863.] I am glad to see in BRITISH BEE JOURNAL for May 17 (1855, p. 194), that Mr. B. C. Jones has had something to say respecting the "two queen system" of bee-keeping, as I believe that the views of correspondents who have made trial of the plan will assist in bringing about the end we have in view, namely, to get larger crops of honey with less labour, less expense, and with more certainty. For this reason I also, like your correspondent, desire to see in print what others have to say upon the subject, but we want the experiences of bee-keepers who have tried it strictly upon the lines laid down, or of those who may have turned aside in order to introduce what they have thought to be something better, and have succeeded. It is not right for one to go a little way on the road, and then turn aside to suit his own ideas, and if, by so doing, he does not succeed, to blame anything or any one rather than himself for failure. Your correspondent says his bees "did not cluster close up to the perforated dummy"; that was not the fault of the system, nor of the bees, nor the originator, but is to be found either in the dummy or the manipulator.

Most bee-keepers know that when two lots of bees, strange to each other, are put into one hive, they at once display bitter enmity, and the thin perforated dummy being placed between them does not make them friends. We also know that bitter enemies never pitch their tents as close together as they can, hence your correspondent ought not to have given his bees a choice in this matter; by so doing he lost most of the advantages to be gained during the winter months. There is nothing whatever strange in what has taken place with his bees in this particular hive; all that happened was just as I should have expected, and I affirm confidently that if everything had been done as it ought to have been done, your correspondent's eyes would have been turned another way and his writing had a different tone, for he would have achieved success. He writes now as if he considered that he had given the system a fair trial, whereas it has been no trial at all, and I should judge his failure has been brought about for want of knowledge in a few little but essential points.

I wish bee-keepers to clearly understand that I have nothing to gain by their adopting my system. The probability is that I believe I would have been a financial gainer by keeping the system to myself, and I have been blamed by many for not doing so, but I have not desired to try and fill my pockets by emptying others, hence my making it public. I do not ask any one to adopt it, but I merely say what I have done with it, how I have done it, and given the results, and I leave it open for others to follow or leave it alone, just as they choose; but in consideration of your space, I will refrain from saying more here, as I know you cannot allow me room, neither have I time to write details to every one, but if the advertisement columns are consulted, it will be seen where and how a list of instructions from my own pen and practice may be had. When bee-keepers have carried out the instructions therein given to the letter and failed, then, and not till then, should they blame the system or its originator for their want of success.—G. WELLS, *Aylesford, Kent, May 22.*

WHAT SOME OF US WANT.

A MARKET FOR OUR HONEY.

[1864.] I have lately had two separate deputations of working men to visit my apiary; they live a good four miles away as the bee flies. This shows, I think, a little energy on their part. I showed them my hives, bright with fresh paint, bee-tackle, &c., and they professed themselves highly pleased. There was the extractor, all clean and shining; the section-crates ready to go on; piles of frames, fitted with foundation ready for swarms; a gross of empty honey-bottles; a queen cage or two, &c., &c. I put my visitors up to a few dodges, showed them a queen*, and they went home happy in the idea that honey-growing, though it costs a little trouble and a little money, pays in the end (as it certainly does). And they promptly go in for hives after a pattern I recommended, and write to me triumphantly to say how one and another has got a swarm into these new hives.

But all the time I felt myself a little bit of a humbug! for what are these men going to do with their honey when they have got it? I can sell all I grow, but if I take their honey I become a sort of middleman, and shall probably get no thanks from either the producer or the purchaser. Our bee associations profess to help the cottager. Now a market at the door is what the cottager wants. He buys at his door; the grocer's shop is in these days almost unknown to him; he knows the grocer's cart. If he could sell his honey at his door, even at 6d. a section, it would pay him; but he cannot, or he will not, seek a market.

* N.B.—The queen was *not* balled, and I have not seen a balled queen yet.

Last year a neighbour of mine, a water keeper, with one hive which he bought through me, grew some of the finest sections I have ever seen. He got a first prize at our local show; he would have got the same at many a larger show. He had about thirty saleable sections. The local grocer would not look at them, so they hung on his hands. He used most of them in his house, but as I had an unexpected order I relieved him of a few.

Could not our county associations help the cottager to a market? I see the Hants and Isle of Wight Association are going to discuss at their annual meeting "some proposed new methods for facilitating the sale of honey." I hope these methods will not begin and end with a flaming label. It is not the label but the market that the cottager wants; in towns the chief demand for honey exists. The problem is how to bring the shillings of the town to the door of the small producer of honey, and to get the golden honey of the small producer cheaply on to the breakfast table of his brother the artizan.

I could write a great deal more on this subject, but I am afraid that already the length of this letter will frighten you; but if you should think fit to publish this, and it excites any correspondence, I shall, with your leave, have something more to say.—ROBERT S. ROUTH, *Stockbridge, Hants, May* 25.

[It is within our own knowledge that not a few cottager bee-keepers are able to dispose of their honey by simply displaying a section or two and a few jars of extracted honey in their cottage window, together with a label notifying its being on sale during the season. A clean cottage, and scrupulous cleanliness and neatness in the get-up of the honey thus shown, are quite attraction enough to make consumers often go a long way in order to procure home-grown honey in preference to that obtainable in shops. Again, does it not seem hard that honey is not to have some effort made for its disposal? The wives of cottagers who grow surplus garden-stuff—be it fruit, flowers, or vegetables — take their baskets on market days and turn the produce into cash; some women taking their neighbour's few "extras" for sale along with their own. In this way we have seen honey taken and sold—for a good price, too—the bee-keeper allowing his friendly neighbour a commission for doing the selling. We quite admit the difficulty our correspondent desires to overcome, but fear that whoever has produce to sell must in these competitive times make some personal effort to sell it.—EDS.]

NOTES FROM NOTTS.

[1865.] I was pleased to see your editorial remarks respecting foundation, as I am sure that very many bee-keepers do not discern the difference in the way the cells should run. The thin-wired foundation imported from America some years ago was cut in the wrong direction, and I was much surprised to see a lot of foundation supplied by one of our best appliance dealers this year also cut so that the parallel sides are horizontal instead of vertical.

I have often expected to see some of your correspondents ask why entries for the "Royal" shows have to be made such an absurdly long time before the date on which the show takes place. Even post-entries at double fees close on May 12, nearly a month sooner than ordinary entries might reasonably be accepted. I feel certain this must, especially in good years, tell against the show being more popular. We in Notts always try to keep entries open till as near shows as possible, and I think it might be done with all-round advantage in the case to which I have drawn attention.

Following the good example of Berks B.K.A., we have adopted Association honey labels, a sample of which I submit for your inspection.—A. G. PUGH., Hon. Sec. Notts B.K.A.

[Referring to our correspondent's complaint of the early date on which entries for the "Royal" shows close, he loses sight of the enormous extent of the preparations required for what is justly known as the largest annual Agricultural Show held in the world. Space has to be apportioned and allotted a long time beforehand, the official surveyor requiring a plan of each department and the space required many weeks before the show takes place, in order to facilitate the arranging of the ground, as well as the preparation of catalogues, &c. All this is unavoidable in a show of such magnitude as the "Royal." Bee-keepers, however, have the privilege of claiming the return of their entrance-fees if, owing to bad weather, their exhibits cannot be completed in time, and this arrangement should go a long way towards removing the hardship of closing entries so long beforehand.—EDS.]

EARLY HONEY IN YORKSHIRE.

DOUBLE-QUEENED HIVES.

[1866.] On examining my hives to-day (May 19) I found four completed sections, and see that there are about thirty more nearly finished. Looking back to dates, you will see that I have beaten my record of May 24, 1890, at which date I asked you about the double-queen system, and, getting no reply from any bee-keepers, I tried the system myself, and found it to answer. I did not, however, try it with the wooden dummy. You will find my letter, headed "Co-operation Among Bees," in B.J. of June 5, 1890. I had a double hive at the time I wrote, but, as the BEE JOURNAL was difficult to get here, I lost all record of what might have been in its pages; but now that I am getting it I see that Mr. Wells has adopted the double-queen system. I do not know whether he took my

hint or not. If Mr. Wells should see this, he might kindly reply in the JOURNAL if it was his own idea or if he got it from the letter I refer to. I have a bell glass on one of my hives nearly completed; its weight will be about 28 lb. when finished. I think I do well, as my apiary is two miles from me, and I only see the bees once a week. I seldom get swarms, as my hives hold twelve and fourteen frames, so they have plenty of room. There have been swarms about here last week from straw skeps, and many more have them hanging out. I sometimes wonder how Mr. Wood, of Ripon, is getting on, as he has not been writing lately.—THOS. ROTHERY, *Tadcaster, Yorks, May* 19.

PUTTING ON EARLY SECTIONS: IS IT HARMFUL?

[1867.] Could you advise in the next issue of the BEE JOURNAL? I saw in the Dublin *Weekly Freeman's Journal* of May 18, that anyone putting on sections then would regret it, giving no reason why. Now, as I have on crates since May 11, and am about adding second tiers of the same, while to-day (May 27) I saw sections partly sealed and finished, I cannot understand advice that may prevent others from putting on sections in Ireland until they may be sorry for not having done so sooner! Your advice may be of value to many who may have been led astray by the remark I allude to.—T. KIRWAN, *co. Galway, May* 27.

[No doubt whoever penned the advice referred to had in view the very adverse weather conditions of the last week or two, but if bees are actually storing honey in such quantities as to need second stories of sections as stated, the inference is that the writer of the "advice" either is located in a poor district or is not in close touch with his bees. Given full and strong colonies of bees it can never do harm at this season to give room, even if honey is not coming in, but with weak stocks anything tending to lower the temperature of hives may do harm, and consequently cause regret.—EDS.]

TRANSFERRING BEES.

A BEGINNER'S MISHAPS THROUGH INEXPERIENCE.

[1868.] I should be grateful for advice respecting one of my stocks of bees, as I am quite a beginner, and do not know how to treat them. They are a swarm of 1892; they were then hived in a straw skep. In 1893 they did not swarm at all, though repeatedly they appeared to be on the point of doing so. Last September I drove them into a wooden hive—a home-made one, without frames, and merely with parallel strips of foundation fixed in it, and without any means of opening or examining it. I found the skep full of combs, mostly very dark in colour, and, as far as I could judge on consulting "The Bee-keeper's Guide," full of foul brood. The combs were all destroyed after straining off the honey, which, however, proved useless, for as soon as it was bottled it fermented. I kept the bees alive all the winter by feeding them through a hole in the top of the hive, using syrup in the autumn and candy in the winter as directed. On May 18 I wished to drive this stock into a Cowan hive. In the evening I drove the bees as a preliminary into a skep, but by the time that was done it was dark and cold, so I left the bees in the skep for the night, and put the box-hive, full of comb and brood, in a somewhat warm place indoors. In the morning I transferred all the combs to frames, with which I filled the Cowan hive, and then successfully hived the stock of bees. I did not see the queen, but the combs were full of drone and worker brood in all stages, besides a good deal of honey; I could not detect any foul brood. Some of the comb was very dark, considering it had only been worked out from foundation last autumn. I am now afraid all the brood must have been chilled, or killed outright. by the cold evening air when the bees were driven, and by the night spent away from them. I enclose a specimen of comb and brood, and my questions are these:—1. Is foul-brood present? 2. How can I tell if the large quantity of brood in the hive is dead or chilled—as I think it must be? and if so (3) what should I do? Some of the brood I know was killed by breaking of the combs during transferring, but the bees have not thrown any out, and seem working well. 4. What are the dark cells in the specimen of unsealed honey-comb? 5. How had I better treat this stock for the rest of the season — if they swarm, for instance?—A BEGINNER, *Hants.*

[We should neither do justice to our correspondent nor ourselves by witholding our opinion that the method of bee-management indicated in the above was all through injudicious to a degree. And to avoid anything which may even seem discourteous to our querist (a lady), we give the following reasons for saying this much:—1. To drive bees from their combs and stores in September and put them into a home-made empty box without frames, was, well—unwise. 2. Judging by what took place subsequently we should say there was no disease at all about the bees. 3. If it had been "full of foul brood," as stated, to extract and bottle the honey—presumably for future use—from such a stock was about the worst thing that could be done with it, save giving it as food to healthy bees. However, the foregoing having been got over safely, and the bees apparently doing well, we ask what evil genius could have prompted our correspondent to break up the combs in such adverse bee weather as the present in order to transfer them to a fresh hive? so that, while experienced bee-keepers are wrapping up their colo-

nies to protect them from the bitter weather, this unfortunate stock has its bees driven from the combs, thus depriving the brood of its natural warmth during the whole of a cold night for no possible advantage that we can see.

We are quite hopeful that these—shall we say fatherly?—remonstrances, coming from an "old hand" at bee-keeping, will be taken as good-humouredly as they are intended, and trust that our correspondent, who we know is only a beginner, will "not do it again." Having written this much, we may add the brood in comb sent was in the finest condition before being disturbed, but now it is all chilled and dead through cold and the exposure to which it has been subjected. We cannot render much help in undoing the mischief, and so reply to the queries enumerated as follows:—1. No. 2. By the sealed brood failing to hatch out in course of the next ten or twelve days. 3. We should feel inclined to throw the whole of the brood into the fire unless something, of which we are not cognisant, led us to suppose that some of it was still alive. 4. Simply the signs of comb having been bred in. 5. As the stock is "working well" we should super it—if room is needed—when honey is coming in. There is, we fancy, not much fear of its swarming if the bees have to fill the hives with new combs.

We gladly accept your apologies for length of letter, &c., and offer our own for the plain speaking of this reply.—EDS.]

REMOVING BEES FROM TREES.

[1869.] Could you advise me how to get a stock of bees from a tree? I have tried to drive them out, but failed. I then fixed a tube through the back of a wooden hive, and the other end of it in the hole in the tree by which the bees entered, but to no purpose. They used the tube as a passage into the tree, but took no notice of my hive. It is a good stock, and I should much like to get them out. Perhaps some reader of the B.J. would give an opinion how to proceed, as I have seen similar cases mentioned in it.—W. ADAMS, *Welwyn, May* 20.

[There is much difficulty in advising what to do without inspection of the tree and surroundings. Usually, however, it necessitates cutting down before a stock of bees can be got from a tree without destroying them.—EDS.]

DO LIMES BLOOM IN MAY?

[1870.] Surely your correspondent, Mr. Percy Leigh, must have made a mistake in his note on page 208 of your last issue. He says, "Dutch clover, *limes*, peas, and broad beans now in blossom." This was written on May 16. Except in 1893, I never remember seeing limes in full bloom before the end of June or beginning of July. From my diary I see the following are the dates of lime-trees being fully out for the last four years:—1890, July 12; 1891, July 15; 1892, July 8; 1893, June 18.—A. L. Y. MORLEY, *Northants May* 27.

[We confess to having inadvertently failed to notice what must have been a "slip" on the part of Mr. Leigh, as limes, even in the south, rarely bloom before the second week in June.—EDS.]

THE BAD WEATHER.

[1871.] I have had five swarms up to the present date, the first on April 29, and have removed eight filled sections. The season, however, is rapidly passing, and as we rarely get any honey in this district after the third week in June, it makes us anxious for a change of weather. My first swarm was from a "Wells" hive. I did not put it back, because of wanting some sections from it; but I have had to feed the swarm up to now.—W. H. WOODS, *Hemingford, May* 28.

HONEY BOTTLES.

[1872]. In reply to "Lordswood" (1859, p. 204), please allow me to state that the honey bottles advertised by me have "strong metal caps," and may be used any number of times.

If "Lordswood" will send me his address, shall be pleased to forward sample.—W. T. GARNETT, 18, *Steade-road, Sheffield.*

EARLY SWARMS.

[1873.] I had another swarm on Whit Monday. That is the third swarm I have had this year; two from a "Wells" hive, and one from a "Gayton." This time I had the pleasure of watching the bees from the commencement.—W. R. TRAVISS, *Willesden, May* 22.

Queries and Replies.

[1052.] *Queen Cast Out.*—I herewith send you a small box containing a queen and three workers (all dead). The queen belonged to a friend of mine, who found her yesterday lying dead at the entrance to one of his hives. The stock was transferred to a new hive May 5, the bees left the frames and clustered under the alighting board; they were then thrown in on the top of frames, and hive moved to a fresh site. Queen thrown out yesterday, May 20, fifteen days after transfer. Stock was overhauled soon after queen was found, and three open queen-cells discovered, and three frames deserted by the bees. Sealed brood in some of the other frames, but neither queen, eggs, nor grubs to be seen. 1. Do you think the stock has recently

swarmed? 2. Is the queen sent a young or old one? 3. What do you consider to be the cause of her decease? The three workers are from one of my stocks. Bees last year from same stock were much darker than now. 4. What cross are they? 5. Are they a good strain?—PERCY LEIGH, *May* 21.

REPLY.—1. It would rather appear likely that the queen was injured when transferring the bees to the new hive, as there are signs of such injury on her thorax. 2. She is an adult. 3. The one stated above. 4. Ligurian hybrids. 5. As owner of the stock you should be the best judge of that.

[1053.] *Foul Brood and Disinfecting Hives. Will Naphthaline and N. Beta Spoil Honey?*—Thanks for your advice on foul brood. I see in B.B.J. of May 3 disinfecting is advised by painting hives with kerosene, then burning. I have tried to get kerosene at the chemists', but they do not keep it. 1. Where can I get some? If I put naphthaline in the hive will it make the honey taste of it? 2. Does not the naphthol beta also get mixed with the honey if the bees don't clear it all off for food, and so spoil the honey? 3. If a strong stock has foul brood and the bees are put in to a clean, new hive, will they not take the disease with them?—R. S., *Dover*.

REPLY.—1. Kerosene may be had from any oil merchant dealing in burning oils. It is, we think, nothing more than a better quality of paraffin oil. 2. We should not recommend the use of naphthaline or n. beta in hives if it had any such effect on the honey as you suggest. Used as directed it does no harm at all to the honey. 3. No doubt it considerably assists in curing a foul-broody stock to remove the bees from the diseased combs and put them into a clean hive on sheets of foundation, some going so far as to claim that doing so will eradicate the disease. We do not, however, by any means go so far as this, and only acknowledge the removal as one among other means necessary to attain the desired end.

[1054.] *Transferring Recently-hived Swarms.*—I should be very glad of your advice on the following points:—1. I have purchased two swarms, both nearly three weeks old. Shall I transfer them now from straw skep to frame-hives, or wait until autumn? 2. One is about a mile and a half away. Shall I bring it home now, or wait until autumn? 3. Would you advise a skep-super holding sections being placed over straw skep (stocks or swarm)?—DOUBTFUL, *Tonbridge*, *May* 25.

REPLY.—1. By all means leave transferring till autumn. To transfer combs and brood from a skep only three weeks after hiving would require a very experienced hand at bee-work, and we judge you have not been long a bee-keeper. 2. So few opportunities for bee flights have occurred during the time the swarm has been hived, it might be removed now if there is anyone at hand to show you how to reverse the skep for carrying without causing the tender combs to break down. Probably there will be very little honey in the combs, owing to the cold weather, otherwise we should advise deferring removal till autumn, as a break-down might so easily occur. 3. Yes, when the bees require room for surplus storing.

[1055.] *Do Bees Remove Larvæ?*—Kindly say how the produce of black queen mated with a ligurian drone would compare in appearance and colour with the reverse cross, *i.e.*, a ligurian queen mated with an ordinary English drone? 2. Do bees ever remove larvæ from one comb to the face of the one opposite; say, for instance, if there were greater facilities for constructing queen cells on the other comb?—MOUCHE A MIEL, *Wolverhampton*.

REPLY.—1. Though the drone is generally supposed to impress its characteristics on the progeny through the queen, the difference is not so marked as to be indicated in words. 2. No. It is believed that bees do sometimes move eggs from one cell to another, but not the larvæ.

[1056.] *Dealing with Swarms and Swarmed Hives.*—I got swarms to-day from each of two small box-hives in my apiary and hived them in bar-framed hives. As the swarmed hives are too small to take section crates I thought of putting on each of them a small box containing a few shallow frames. 1. Is this advisable? 2. Would there be any danger of the queen getting into the upper box? 3. Should it be done at once? 4. About how many pounds of honey does a shallow-frame hold? 5. Should I allow the hives to swarm again this year—they are both very strong? 6. When should I give sections to the new hives [with to-day's swarms?—BALLINA, *Co. Mayo*, *May* 24.

REPLY.—1. Yes, if the second swarms are returned to the hives when they issue. 2. There is, of course, some danger; but less than if the hives had not swarmed. 3. No; not until the second swarm has been put back. 4. From three to five pounds, according to the width apart the combs are worked. 5. Deal with these in accordance with above replies. 6. If weather is good and honey abundant give sections in about ten or twelve days.

[1057.] *Swarms Entering Strange Hives.—Queens Killed.*—On Friday, May 18, I had a swarm from a bar-framed hive, which I returned, but in doing so was unable to capture the queen. Three days later a swarm issued from the same hive, and went into a bar-framed hive full of bees. There appeared to be much excitement and fighting, hundreds of

bees being killed. On the ground near the mouth of the hive I discovered two queen bees apparently dead, but the warmth of my hand quite revived one, which I gave to a friend, who had a queenless stock; the other queen bee I enclose to you. 1. Do you think both queens came out with the swarm? 2. What age is the queen sent? Any further explanation will be gratefully received.—C. A. NEWMAN, *Bristol, May* 22. P.S.—I quite look forward to your interesting paper every week.

REPLY.—1. Only an examination of both hives would quite clear up the point as to why two queens were cast out. The queen received has the appearance of an adult, and this view is strengthened by the fact of the bees swarming again so soon as three days after the swarm—queen and all—was returned to the parent hive. If this theory is correct, the inference is that in the excitement and fighting the queens, both of the swarm and the hive into which the latter entered, were injured. Examine the latter, and see if the bees have raised queen-cells. If they have, be sure the bees found outside were the parent queens of the hives referred to. 2. Reply to this query is contained in the above.

[1058.] *Improving Strains of Bees.* — I wish to improve my strain of bees, and propose getting an Italian queen from the south and an English one from the north (both from dealers who for several years have been breeding by selection). I propose starting queen-cells in the Italian, and breeding the drones in the English stocks, about the first week in August, of course feeding the drone-rearing lot, as the drones in neighbouring apiaries would be killed off by that date. My neighbours, however, tell me they are a most vicious cross. As I mean to form nuclei for raising queens to requeen all my stocks, perhaps you can tell me of a more gentle and hard-working strain if the above statement is correct; or if you think pure Italians would do better for the Midlands.—G. F. D.

REPLY.—It is an accepted fact that the pure race of most varieties of bees are more gentle and more easily handled than when crossed with another variety. We cannot, however, take the responsibility of recommending particular crosses in order to secure an improved strain of bees. What we do advise is that you obtain a good laying queen of the particular pure race or of the cross you desire to propagate in your apiary, and see if the improvement is worth the trouble proposed to be taken; this will afford an opportunity for testing merits, or otherwise, and enable you to make a selection on safer grounds than by the plan proposed.

[1059.] *Observatory Hives for Shows.*—1. Is comb sent affected with foul brood? 2. What variety of bees are the enclosed, marked 1 and 2? 3. How would you fix a bell glass to get it nicely and well filled for show purposes? 4. Having made a single-comb observatory hive with double glass (on each side) and air space between, is it necessary to put on shutters to keep the bees in the dark? 5. Should it be ventilated at the top, when there is about 3 in. of space below the frame? 6. How long may bees be kept confined in it without the opportunity of getting out to fly? —ISAAC CRAWFORD, *Castlederg, co. Tyrone.*

REPLY.—1. No; it contains only pollen—some of it mildewed. The hive it came from, however, sadly needs refurnishing with new combs. 2. Bee marked 1 is a ligurian, 2 the ordinary native. 3. Fit it with comb-foundation as guides, wrap it warmly up, and give it to a strong stock to fill. 4 and 5. We must know for what purpose the "observatory" is to be used before replying. 6. Bees in single-comb observatory hives are supposed to be only kept in them for a few hours—say at a show—and they are not suited for anything beyond this; although the bees would take no harm by being confined a couple of days in suitable weather.

[1060.] *Trapping Drones to Prevent Swarming.*—I have a hive of bees which I do not wish to swarm this season. 1. Shall I be doing right in trapping the drones now? and 2. Would doing so in any way help the bees in making a better harvest? Of course, my idea is to get rid of a lot of loafers who I take it will not be wanted.—DARFIELD, *Yorks.*

REPLY.—1. There is no doubt but ridding hives of drones tends to stop swarming, and the sooner they are trapped the better. 2. That is a moot point, many experienced bee-keepers holding the view that bees put more energy into their work when there are few drones in the hive.

SEASONABLE QUESTIONS.

ANSWERED BY G. M. DOOLITTLE.

Spacing Frames.

Question.—I think of spacing my brood-frames $1\frac{5}{16}$ in. apart. At present they are 1 . My apiary consists of about 100 colonies. What do you think of the venture?

Answer.—Well, to be candid, it is a venture that I should not want to go into. If I thought I could see some gain in such close spacing, I would try it on, say, ten of the 100 colonies for a year or two, and then if it pleased me I would fix the other ninety in the same way. Here is something that so many lose sight of, and rush headlong into any project which seems good to them, using the whole apiary to experiment with, when they could try the experiment just as well with half a dozen colonies, and if the pet project proved a failure, as is apt to be the case four times out of five, but

little loss would be the result; while such an experiment, carrying the whole apiary with it, often results in a loss hard to be borne. I really wish someone competent would tell us, in a logical way, what there is to be gained in a real, practical dollar-and-cent way by this close spacing of frames, which seems to be a craze just now. I have carefully experimented for several years to find out whether I was wrong in using 1½ in. from centre to centre of frames—that being the average, as I measure it, of combs built by the bees when they have their own way—and so far see no practical reason for changing to either a greater or less distance. If there could be artificial heat used, so that the hive could be kept warm enough for brood-rearing in any part of it during the spring months, then the case would be different from what it is where it is necessary for the bees to create the heat sufficient for brood-rearing inside of the *cluster of bees*, and not inside of the hive. To thus create and preserve heat inside of the cluster, the bees must have more space than for a single tier of bees between each range of combs. In my experiments I have found that far more brood will be brought to perfection during the cool days of April and May with 1¾ spacing than there will be with 1¼ spacing; but when we come to July weather, then the most brood will be produced with 1¼ spacing. But all know that, as a rule, one square inch of brood in May is worth ten square inches in July; and, as we do not wish to be continually spacing our frames, we cannot well adopt 1¾ for May and 1¼ for July, so I strike the happy medium of 1½ in., and use the same the *whole* year through.

Contraction for Swarms.

Question.—At the Chicago International Convention some favoured hiving new swarms on four or five L frames to obtain the most surplus comb honey, according to the report of that convention. In so doing is it necessary to fill the empty part of the brood-chamber, where comb foundation is used in these five frames, to prevent the bees building comb therein? Also, is it necessary to use a queen-excluder over such colonies?

Answer.—It will be necessary to shut the bees out of the vacant part of the hive while it is thus contracted to four or five combs, otherwise the bees will build comb in this vacant space in preference to going into the sections and working there, for it is more natural for bees to fill up the apartment where the queen presides rather than to go into separate apartments away from her. In fact, bees will store more surplus honey in an apartment with the queen, if that is large enough to accommodate them, than they will in any other way; and the object of contraction is for the purpose of compelling the bees to enter the many surplus apartments made by the different sections. The best thing I know of to fill up this vacant space at the sides of the four or five frames given is what are termed "dummies." After you are satisfied regarding the number of frames you will use, then make dummies out of thin lumber, so that one on each side of the frames used will exactly fill up the room. This is easier than to use a number of division-boards, although the latter will answer the purpose, but will require more labour in handling. You will also need to use a queen-excluder, for in a contracted hive the queen is quite liable to go up into the sections and deposit eggs, which the bees will nurse into brood; and brood in sections is one of the most provoking things that ever confronts a bee-keeper.—*Gleanings.*

HONEY IN A PETRIFIED TREE.

An interesting find has been made in Texas. While workmen were digging a well on a farm near Bandora, they unearthed a petrified tree at a depth of 46 feet. The tree was hollow, and the cavity was filled with honey. The comb was in a perfect state of preservation, and the cells were filled with honey that tasted sweet, fresh, and pure. How old this honey is cannot be known, but it must have taken hundreds of years to have buried the tree to that depth and caused its petrification by natural causes.—*Science Siftings.*

TRADE CATALOGUES RECEIVED.

Chas. Redshaw, South Wigston, Leicester.—Mr. Redshaw's 32-page list for 1894 is exceeding well arranged and complete, the information for guidance of purchasers being so exhaustive and clearly put that no mistakes need occur between buyer and seller. The number of prizes gained at important shows by the various hives illustrated sufficiently attest their general excellence. We also note many articles not found in other lists, among them the "Rietsche" hand press for the manufacture of home-made foundation.

E. J. Burt, Stroud-road, Gloucester.—24 pp. A well-arranged, if not very pretentious, list of bee-goods, containing only useful things for the apiary

Bee Shows to Come.

June 7 and 8.—Wilts Agricultural Show at Devizes. The Wilts Bee-keepers' Association will attend as usual. No prizes. For particulars apply to W. E. Burkitt, hon sec., W.B.K.A., Buttermere Rectory, Hungerford.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Entries closed. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 13 and 14.—Essex B.K.A. at Colchester. Entries closed. Post entries at double fees. Fifteen open classes. Hon. secretary, F. H. Meggy, Chelmsford.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries closed. Secretary, John Huckle, B.B.K.A., King's Langley.

July 18, 19, 20. Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances. Liberal prizes. Entries close June 29. S. Upton, secretary, St. Benedict's-square, Lincoln.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23. At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

H. W. Clarkson (West Hartlepool). — 1. Refined cane sugar should be used for bee food, either lump or crystals. 2. Swarms should be fed so long as weather is cold and no honey coming in. 3. Hives should be set *level*. 4. Only pure wax should be used in making foundation. 5. The plan you propose is sure to damage the swarm more or less.

R. F. Williamson.—Comb is badly affected with foul brood.

P. W. Parsons (Tun. Wells).—Though we cannot find positive traces of foul brood in comb received, it is apparent the stock from which it came is in a bad way at present. Some brood has been chilled, rendering foul brood easy of development, and in several instances eggs are duplicated in the cells, showing either queen or bees to be in fault. If there are so few bees as you say it is worthless. On no account put combs outside to be cleared of their contents by the bees, as you suggest.

Verax (St. Ives).—Our correspondent will pardon us for saying it is scarcely fair to keep comb with rotting brood in it "lying about for a month" before sending it on for inspection. So far as we can judge, the brood is "chilled," not foul, but the comb is in such horribly foul condition that the sooner it is burnt out of sight the better for your apiary, and all bees within reach of it.

Amery (Gloucester).—There is no reason why you should not feed the bees if they need it, and there are no supers on the hive. There need be no fear of the bees carrying the syrup into the supers.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

SITUATION required by Young Man, to manage Bees; garden. N. T., Merton-street, Banbury. E 9

HONEYCOMB DESIGNS.—"V R." cannot fail to please you. Post free, 4s. 6d., with instructions. Charles Cox, Brampton, Northamptonshire. E 7

SPLENDID HIVES, on the W. B. C. principle; fitted complete for use; strongly made; no extras, 18s. Combination Hives, 10s.; Champion Hives, 5s. 6d. (All made of pine). Particulars on application. C. Morrey, Five Ways. Neston, Chester. E 5

BEES.—FOR SALE, several NEW SWARMS of this month for SALE. Apply to the Gardener, Kewhurst, Bexhill, Sussex. E 8

FOUNDATION MILL.—WANTED, a Second-hand FOUNDATION MILL, to alter for experiments. Bazeley. Naturalist, Northampton.

"YE OLDE ENGLISHE BEE."

PRIME natural Swarms of my selected strain of English Bees, all '93 Queens, carefully packed, and put on Rail, 15s. per swarm. W. Woodley, Beedon, near Newbury.

Porterage on Telegrams, 1s. 6d.

HONEY and BEESWAX, valuable recipes for use of; 10s. per 1,000, four a penny. Will increase local demand. Vendor can print or stamp own address on. George Stocks, Sandiway, Northwich. D 100

FIRST SWARMS of my splendid strain of BEES, which cannot be excelled, 15s. packed free. John Walton, Honey Cott, Weston, Leamington. D 95

PURE ENGLISH BEES, splendid strain, swarm early, good gatherers. Small swarm with queen, 5s., larger, 10s. 6d., superior, 15s., nuclei, 5s., all on rail; queens, 3s. delivered. Alsford, Expert, Blandford. D 98

GUARANTEED Healthy Natural SWARMS, ready for delivery, 3½ to 4 lbs. each, price 12s. 6d. Packing included. 1s. each allowed for boxes returned. Address, C. Whiting, Valley Apiary, Hundon, Clare, Suffolk. R2

BEES, NATURAL SWARMS, healthy and strong, free from foul brood, 10s. 6d. each, boxes 2s. 6d. if not returned. E. Long, Cottenham, Cambs. D 87

WANTED, SECTIONS of COMB HONEY (any quantity), and HONEY in bulk. State price, &c. Orders also given for coming season. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London. 199

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. Holliday, Astbury Congleton.

STOCKS, NUCLEI, SWARMS, and QUEENS FOR SALE. Address, The Rev. C. Brereton, Pulborough, Sussex. 192

BEEKEEPERS in LANCASHIRE and CHESHIRE and surrounding Districts please note that the

CENTRAL SUPPLY STORES

for all BEEKEEPERS REQUISITES is in LIVERPOOL at the OLD SPOT, 50, GREAT CHARLOTTE STREET, GEORGE ROSE, successor to P. Harbordt.

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A large consignment of the beautiful

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both 4 bee-way and 2 bee-way, on hand.

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For prices and full particulars of Goods see Baldwin's Bee-keepers' Instructor (and Illustrated Catalogue combined), which "contains more practical and reliable hints than all the large, expensive books," post free for 2*d.* stamps.

Address **S. J. BALDWIN, The Apiary, Bromley, Kent.**

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Cash must accompany Order.

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One Correspondent says:—"I have used it on removing a particularly irascible colony into a clean hive, with perfect success."

Another says:—"I have kept bees for thirty years and have lately purchased a bottle of this wonderful stuff, and cannot persuade my bees to sting me do what I will with them."

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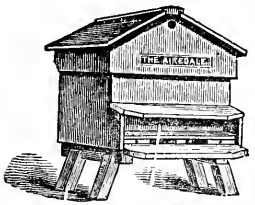
Invaluable to Travellers Abroad as an Insectifuge.



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Bee-keepers' Supplies

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Hives, Extractors, Smokers, Feeders, Foundation, &c.

Prizes Awarded, Gold, Silver, & Bronze Medals.

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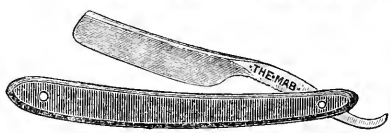
EASY SHAVING WITH THE 'MAB' RAZOR.



The Mab Razor is a revelation to those who have habitually used the big, clumsy Razor of the period. The ease with which it is manipulated enables the user to shave in half the usual time. The blade is manufactured of the finest ENGLISH STEEL, and can be had either plain or hollow ground. At the great Shaving Contest at the Royal Aquarium recently, little Nellie Wick SHAVED FIVE MEN IN 4 MIN. 42 SEC. with the MAB RAZOR.

Can be Used Entirely without Stropping.

Many flattering notices from the Press, and unsolicited Testimonials.

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"I beg to say I am delighted with the Mab Razor, which is an excellent little instrument.

Yours, &c., H. BARRON."

Prices—Black Handle, 2s. 6d.; Ivory, 3s. 6d. Pair in case (Black), 7s. 6d.; Ivory, 9s. 6d., post free.

"MAB" CO., 94, Newhall St., Birmingham.

J. H. HOWARD, HOLME, Near Peterboro'.

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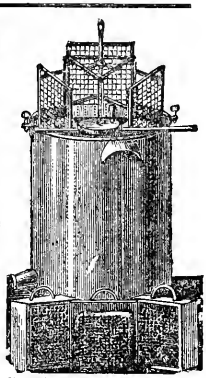


Section Extractors, 7/6

Inventor and Patentee:

T. LOWTH, Riseholme, Lincoln.

Editorial, Notices, &c.

USEFUL HINTS.

Weather.—At last, and after a disappointing time lasting for several weeks, there are now sufficient signs of coming settled and normal June warmth to encourage bee-keepers in their work and in the reasonable hope of a remunerative season. Bees, by their present activity, show that nectar is now being stored in such blooms as remain of May flowers, though there is, unfortunately, not the wealth of blossom to gather from which was so abundant a few weeks ago. What are known as "fruit honey" districts will have suffered most in this respect, because of the main or summer bee-forage not being yet due for blooming. This will, no doubt, have an adverse effect on the earlier bee and honey shows, but it should serve as a stimulus to those who are fortunate enough to have honey on hand—whether of this or of last year's gathering—to stage all they possibly can, both for their own sakes (in prizes) and for the credit of bee-craft and of the shows.

Swarms and Swarmed Hives.—Both of these will need attention at this time, the former by feeding—especially in districts where all early forage is now over and summer food not available—the latter for the same, and the additional need of making sure that young queens are safely mated. The bad weather of the past month has, without doubt, played sad havoc with the chances of queen fertilisation, consequently all swarmed stocks should be examined to see that *worker brood* is being reared; otherwise, or where queens have failed in mating and are breeding drones only, they must be removed as soon as convenient, and replaced with a "ripe" queen-cell on the earliest opportunity when such are available. In the same way, second swarms will need looking to, and if their young queens are found to be safely mated and laying, they must be valued proportionately as forming the most valuable stocks for next year's work.

Preserving Surplus Young Queens.—Too much emphasis cannot be given to the importance of having all colonies with prolific and vigorous young queens at their head, this being the one item of bee-management which constitutes the difference between the reasonable chances of large and small harvests of honey. Not that we advocate for a moment the destruction of queens known to be doing as well as queens possibly can do merely because of their being—as recorded in the "Bee-keeper's Note Book"—thought to have passed the age of usefulness. This is carrying "management" to a risky extreme, for we have often known of stocks headed by queens which, according to the aforesaid "Notes," ought to be old and worn-out, yielding the very best results. Whether this is owing to prolonged maternal vigour and fecundity in the queen, or the result of the bees having *re*-queened themselves "without leave," need not be discussed, and we only refer to it because of the almost fatuous way in which the finest queens are sometimes destroyed for want of a little consideration.

Some bee-keepers have also the bad habit of joining two, three, or more "casts"—or third swarms—in order to make up a strong lot of bees to form a new stock, instead of following the wiser course of returning them to the parent hives so sadly depleted of bees after much swarming. They attach no value to the young queens sacrificed in these "uniting" operations, all of which by a little care could be fertilised and used now in replacing queens doing badly, or preserved for use during the coming autumn in *re*-queening stocks known to require it. When removing old queens and substituting queen-cells, it should not be forgotten that time must be allowed for the bees to realise their loss, and be taking steps to raise a new queen, before introducing a sealed queen-cell, otherwise the cell may be torn down and the embryo queen destroyed by the bees themselves.

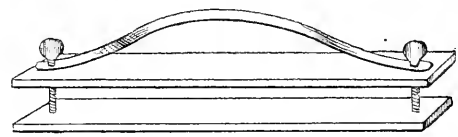
Supering.—Where not already in operation, supering will, we hope, soon be the order of the day, and where stocks are very strong in bees, with honey coming in well, surplus room must not be sparingly given if the prevention of swarming is desired. When bees are in full possession of a surplus chamber—be it a rack of sections or a box of combs for extracting—and a slight examination reveals the fact of honey being sealed over, a second rack or box should at

once be given below the first one. We cannot, however, too strongly impress on readers the necessity for carefully wrapping supers so as to conserve in every possible way the internal warmth thereof. Surplus chambers are not seldom, so to speak, thrown on to hives; no care whatever being taken to surround them with any but the flimsiest of coverings, or to exclude the cold air at the junction of hive and super. The bees, in consequence, either refuse to enter the super at all, or do so in half-hearted fashion, and several days elapse before a full cluster ascends and begins work in real earnest. It needs but to realise how high a temperature is required for the secretion of wax and the manipulation of it in comb-building to understand why bees will, in the early season, make double the progress when working in a warm, cosy super, when compared to what can be done in a cold, draughty one. Hence it is we always use slips of papers—folded to a "knife-edge"—and pushed in wherever an aperture is found, besides covering the super with all the winter wraps which have been in use about the hive. When the season is further advanced and weather becomes hot, a good portion of the wrapping may be removed, but during this month supers should be kept very warm for rapid working.

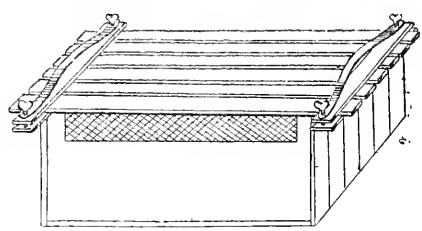
Direct Hiving of Swarms.—A correspondent writes:—"I wish some of our appliance dealers would bring out a contrivance for the direct hiving of swarms on to the frames they are eventually to occupy, so that the subsequent operation of 'throwing out' the bees in front of their new domicile might be dispensed with. I have on two occasions successfully got swarms into the hiving skeps, but have made a mess of the job when doing throwing out business, to my great annoyance, for one of the swarms was lost and the other involved a lot of 'work' before it was got safely into its permanent home."

We quite admit that some experience is needed if swarms are transferred at once from the hiving skep into the frame hive, and always advise beginners to defer the latter operation till evening, when the swarm may be knocked about a good deal without attempting to take wing. A contrivance used and described in our columns some few years ago, however, so exactly meets the case just mentioned that we reprint it here for the benefit of our correspondent and others similarly situated. The writer says:—

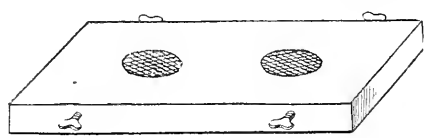
A year or two ago my swarms gave me a deal of trouble by rising again when turned out on a sheet or on top of the frames; or even if they did eventually go in they took so long a time that I tried the following experiment, and have been so pleased with results that I never hive a swarm now without it:—I got a thin box, and made it right to hold six frames, with bee-entrance at one end, but about ¼ in. deeper than frames required. I had two clamps made at our smith's, as shown in



sketch, to clamp six frames together, which they do to perfection, providing they have shoulders or "ends" to keep them apart, holding the frames as firm and rigid as if they were one piece. The thumbscrews of



clamps are passed through the ends of a piece of leather strapping a little longer than the clamps, thus forming convenient handles for lifting by, as shown. The lid has deep plinths, and is held firmly to the box by four thumbscrews passing through the plinths into sides of box, this in its turn holding the whole set of frames quite firm, which



allows me to use the box bottom upwards, exactly as one would a skep, and hive the bees *direct* upon the frames they are to occupy, or if the box (of course bottomless) is propped above a swarm, it is astonishing how quickly they will take possession and cluster among the frames. As soon as they have had a minute or so to cluster, which they will generally do in less time than it takes me to remove the old stock and place a hive ready for them, I stand the box in its own bottom board, which has plinths all round, with bee-entrance at one end. I carry them at once to the stand they are to occupy (often

having to cross a low wall or two from my neighbour's garden): being entirely enclosed in the box, it is quite equal to the occasion. Having brought the swarm to their stand, it only remains to unscrew the lid of the box and lift out the frames with adhering bees by the leather straps into their hive, when scarcely a bee will take wing. Indeed, they hardly seem aware of the change, for, on lifting them out, the full-sized quilt used above frames in the box drops down on each side of the swarm, so that very little sun reaches the bees. As soon as lifted into their hive I at once take one thumbscrew out of each clamp, when the clamps can be drawn from beneath the frames, and the job is done.

The whole operation takes but a few minutes, and several neighbours can testify that I have had the swarm quietly settled on the spot they issued from in less than fifteen minutes. I keep two sets of clamps, so as always to keep one set filled with frames in readiness. Starters of foundation *only* must be used, and they need to be fixed tightly in centre of frames. Possibly some of your readers might care to try the plan, as it is inexpensive.—G. W. Hole, *Patcham, Sussex.*

No doubt an adaptation of the above could and would be easily made to sell at a small cost, if there was a demand for it.

SCOTTISH BEE-KEEPERS' ASSOCIATION.

The third annual meeting of the members of the Scottish Bee-keepers' Association was held in the Imperial Hotel, Edinburgh, on Saturday, May 26, Rev. R. M'Clelland, Inchinnan, Renfrew, presiding. Mr. John Wishart, assistant secretary, read the annual report, which stated that since last year two local associations had been affiliated to the association, making nine in all. The association considered it desirable that local associations should make application to their respective County Councils for grants to enable them to obtain the services of a competent lecturer to tour the country and give instruction in bee-keeping. The Dumfries C.C. had granted £15 for the purpose. At December 31st 228 members had paid their subscriptions, which amounted to £25. 15s., as against £7. 17s. 6d. in 1892. Since the commencement of the year £22. 1s. 3d. had been received from 114 members. The total membership was now 318, of whom 109 had been enrolled during the year. During last year the association gave as prize-money over a hundred pounds, viz.:—£42. 5s. to the summer show, £22 to the Glasgow show, and £38. 5s. to the Edinburgh autumn show. Had it not been for donations from friends of the association there would have been a considerable deficit. Another set of books was presented to the Association Lending Library by Sir T. Gibson-Carmichael, making sixty-six volumes in the library. The report was adopted. The Marquis of Lothian was re-appointed president, and Sir T. Gibson-Carmichael, Bart., hon. secretary. A committee, including the nine secretaries of the affiliated associations, was also appointed. The assistant secretary stated that there was a feeling among the members that the association should not exhibit at the Highland and Agricultural Society's show in Aberdeen this year. The chairman said the Highland and Agricultural Society had treated the Bee Keepers' Association in very niggardly fashion. They had given the association accommodation to exhibit, but that was all. While other industries were encouraged by grants, the association got nothing. After the matter had been discussed, it was finally decided to send no exhibits to the Aberdeen show, and the secretary was instructed to inform the society to that effect.

It was also decided unanimously that the forthcoming illustrated annual report should not be furnished to those members who are in arrear with their subscriptions. A cordial vote of thanks was accorded to Sir Thomas and Lady Gibson-Carmichael for the great interest they show in the welfare of the association, and a similar compliment was paid to Mr. M'Clelland for presiding.

TO OUR READERS.

We must heartily thank those of our readers who, in response to the request made on p. 202 of our last issue, have kindly forwarded copies of the journal for the 17th inst. They have released us of a difficulty and obliged some of their brethren of the craft, who will no doubt join us in this acknowledgment.

CANTERBURY SHOW.

IMPORTANT TO INTENDING EXHIBITORS.

We are requested to state that owing to the untoward weather for honey-gathering of late, the time for making entries to the above show has been extended, and that they may be forwarded to Mr. Huckle, King's Langley, up to the 10th or 11th inst. Those who have the arrangements in hand are doing their best to counteract the effects of the late disappointing weather, and we trust that exhibitors will also make an effort in the same direction.

Honey of this season has been secured without doubt in a few districts, and there should still be on hand some of last year's produce, which could be staged with all-round advantage. We therefore urge readers who are in a position to enter either honey or appliances to communicate their willingness to do so to Mr. Huckle without delay. Every attention will be paid to the wishes of such as are unable to stage their exhibits personally; and, apart from the duty which devolves on all who are interested in bee-keeping, to assist those who, in the face of unforeseen difficulties, are endeavouring to make the show even a qualified

success. There remains, from the more personal side, the fact that the prizes are liberal, and should be well worth the trouble of an attempt to secure them.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

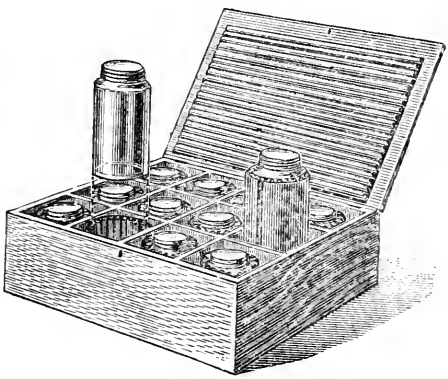
[1874.] The month of June has opened as the month of May closed—unpropitious for both bees and bee-keeping. The last fortnight in May was cold, with sharp frosts, and chilly storms of rain at frequent intervals made things very uncomfortable, and has frustrated all our efforts and hopes of an early and good bee season. June came in with a rainy, dull day, but with a rising barometer. Saturday finer: but rough winds with barometer falling. Sunday, raining nearly all day, though warmer, and barometer rising again and again. We hoped that to-morrow would be fine and warm: but "hope lives eternal in the human breast," &c., especially in the hearts of bee-keepers.

What have we been doing to tide over the results of nearly a month of enforced idleness of the would-be busy bees? Well, after waiting for the summer weather that came not, we individually set to work feeding every stock that was short of stores—and that was nearly all, for those that had a good supply a month ago have run short by having to feed a large family with such a small income. How it has been in some cases where stores were short and colonies strong, and no help has been given, one can only conjecture. The early swarming we hoped for and got prepared for has been postponed (and in neglected apiaries, I expect, till another year). This postponement is trying to bee-keepers who sell swarms, very often to parties who have not kept bees before, and expect when they send an order for a swarm that it will be sent forthwith. There are so many contingencies that prevent bees from swarming naturally in untoward seasons like the present. Take a colony of bees that was ready to swarm by May 15, queen-cells started, &c., then a week or ten days cold, unsettled weather, the young queens are probably destroyed, the started queen-cells torn down, and a fortnight later, with, say, a few fine days, the process of forming a second batch of queen-cells has to be gone through by the colony before the prime (or in some parts called the top) swarm issues. If we could foresee these things and know about when the weather would take up we could work accordingly.

Packing Honey for Shows.—The list of bee and honey shows to come grows longer every week in BEE JOURNAL, and I think a few hints on packing honey to send to the shows will be opportune just now. Those who have had the management of honey shows, and especially the staging of the various exhibits, know the wretched mess some arrive in. This is not only vexing to the secretary in charge, but an hindrance to the staging committee, and doubly disappointing to the exhibitor, who, after all his care in working up to the point of dispatch, so full of hope for the blue ribbon, or medal, or otherwise, to find all lost through the careless handling of his exhibit by a *posse* of railway porters and carmen, perhaps nearly rushed off their legs by the extra influx of goods for show. Where shall we place the blame? I think we must go to the exhibitor, and rather than blame him try and help him by a few hints—how to do it so that his exhibits may reach the show ground in good condition.

In the matter of comb honey I always pack mine—and my exhibits *always* reach their destination in good order—in hay. I first wrap my sections in a sheet of brown paper, tie with strong string, place a layer of hay at the bottom of box, now place the parcel in the box and pack hay all round it and over the top—1 in. or 1½ in. thickness of hay suffices; fasten lid, and cord so that the porters can lift by the cord. Those who can afford the expense of a travelling crate for sections cannot do better than invest in one of the kind, in which springs serve the purpose of preserving the sections against sudden jolting. For bottles the same style of packing as first mentioned for sections has always proved successful in my hands. Procure a grocer's box the size required, put a layer of straw or hay, then pack your bottles of honey (first wrapping them in paper) with some hay between each bottle, and if packed tight and careful, honey in this shape will withstand any railway jar. A neater method, and nearly as cheap, is to get a box a little larger than the exhibit, and place a little layer of hay or packing on the bottom of the box, then a sheet of corrugated paper over the hay, and then cut some corrugated paper large enough to reach round and up to the shoulders of bottles, tie around each bottle not very tight, and stand your dozen bottles in the middle of the box, and pack the space around the bottles with hay, then another piece of corrugated paper over the top, and fill box with hay; screw lid down and cord. By this method the staging executive can remove the bottles of honey without disturbing the packing, and when repacking after the show this expedites matters; and, again, if the exhibit is sold, the box can be used to pack the honey, as the gross value of

box would be under 6d. Yet, again, the most neat and cleanly crate—minus the expense—is one made as shown in the cut below :—



This is divided into compartments, one for each bottle, and each compartment is lined with corrugated paper. The bottom is covered with corrugated paper also, and the lid is covered with the same protecting material. The exhibits are easily removed, and as easily packed again.

For larger quantities of honey—say, four or six dozen—I always use grocers' empties, generally cube sugar boxes, wrap the honey in parcels of half-dozen or in one dozen parcels, then pack in hay a two-inch layer at bottom, then as many parcels as can conveniently be placed so that there is room for a margin of packing all round them ; another layer of hay, and another layer of parcels of honey. A Martineau's cube-sugar box holds half a gross comfortably. Tate's cube boxes are not quite wide enough, but by knocking off one side, nailing on an inch strip of wood, and then the side on again, they will take the half-gross of sections all right.—W. Woodley, *Beedon, Newbury.*

SINGLE *V.* DOUBLE QUEENED HIVES.

[1875.] I see a letter in last week's B.B.J. from a Mr. Rothery (1,886, p. 213), asking what has become of me? Well, I am still keeping bees (I have twenty-five stocks) with success, although I do not go in for the "Wells" hives ; indeed, I am afraid I can't recommend them to my friends, although I have never given them a trial, as I really do not see where the advantage comes in. Mr. Wells has been most kind in making public his system ; but I can certainly get larger results from the worst two of my single hives than he seems to get from his two queens, which, of course, are really two hives. Then, again, I know of several cases where stocks were simply put one on the top of the other in spring (of course, with excluder between), and both entrances left open, with the result that neither stock killed their queen, and both worked in the same sections with large results. But, still, they were two stocks the same as the "Wells" hives.

I have given up single walls, and now have forty double-walled hives. I do not get better results from the double walls, but I was much bothered with rats getting under the roofs past the frame ends and playing havoc with everything. The double walls are also much more convenient to pack for the moors. Last year I had 1,454 lb. from twenty-one hives, but I was experimenting with two hives, and one was a weak stock which did not give me much. Bar those three hives, any two of the others would have beaten any double-queen hive that I have yet heard of ; and then again about half was comb honey, and I see Mr. Wells had only a small proportion of sections. My advice to those who wish to sell their honey well is to send out nothing but what is the best. Let the sections all be *clean* and *well filled*. My best customer, who will give me an order for five or six hundred sections, said to me one day, "I always prefer dealing with you to anyone else ; we never have to open your sections out to see what they are like, but pass them over the counter just as we receive them from you." This is one great secret of making a market.

Now about those two hives I was experimenting with. It may or may not, according as the four I am trying this year turn out, make a stir in the bee-world. I tried an entirely new way of preventing swarming. The bees were kept on nine frames only, with no sections on (so as to give the system every test), and the queen and drones had free access to the open air. In spite of this, and although every space was filled up with honey, and the bees idle up to June 18, they had not even commenced building queen-cells. I then put a crate of sections on each, which they had just time to complete, so of course the results were not large. They did not swarm. This year I am trying four hives on the same system, but of course have put on section-crates, as I only left them without last year to put them to a severe test. If it does not answer, you will probably hear no more about it.

The weather here is miserable. Some two or three stocks are casting out drone-brood, and of course I have fed them at once.—Arthur J. H. Wood, *Bellwood, Ripon, June* 2.

DOUBLE-QUEENED HIVES.

WHO ORIGINATED THE IDEA?

[1876.] On reading the letter of your correspondent, Mr. Rothery (1866, p. 213), I at once referred to my B. J. for 1890, finding therein the mention of double-queened hives as stated. In reply to his question as to whether I got the idea of the two-queen system from that letter or not? I can only say

that to the best of my knowledge I never saw his letter at all till now, and I most certainly did not get the idea of the system from it. I have in the pamphlet lately published stated fully all about the two-queen system in my hands from the first trial of it until the end of last year.

I also observe that another correspondent of yours, in same issue (1871, p. 215), had a swarm from a "Wells" hive on April 29, which he "did not put back because of wanting some sections from it." Now who would have thought of a bee-keeper making such a mistake? Why, to put the swarm back was the very thing he *ought to have done* if he wanted his sections filled! In fact, the swarm should have been dealt with according to my own method, as described in print, and by so doing he would have saved some young queens for future use, and got his sections filled in addition. Reference to back numbers of Bee Journal, or to my pamphlet, will clearly show this.—G. Wells, *Aylesford, Kent, June* 4.

A SELF-HIVER SUCCESS.

[1877.] I am pleased to be able to report a trial with my self-hiver. You will probably remember I had four hivers on last season, but did not get one swarm from twenty hives. On Whit Tuesday last I was pleased to be summoned to my garden, as the bees were swarming, and found they were coming from a hive that had the hiver placed against it. The swarm flew about in the air for four or five minutes, then clustered completely over the "hiver;" but in a few minutes all were inside, and in the evening I found there was about a gallon and a half of bees. I found, when putting them in a frame-hive in the evening, they had built a small piece of comb in the box. I have placed that identical "hiver" against the hive of a friend a few miles off, with the comb my swarm built in it, and hoped ere this to have been able to report more trials; but the last four days have been very cold, even strong hives, with supers on and half-filled, were throwing grubs out on May 21.—G. W. Hole, *Patcham, Sussex.*

EARLY YORKSHIRE HONEY

AND THE CLAIMANT OF THE "WELLS" SYSTEM.

[1878.] I am pleased to see by your correspondent (1,866, p. 213), that we in the West Riding of Yorkshire are not all busy feeding our bees. Seeing that the honey-gathering days so far can be numbered on our fingers, it would be interesting to know if your correspondent's bees are weather-proof.

Surely Mr. Wells has tried to do his best for bee-keepers, and he deserves their best thanks for his efforts, as by his letter (1,863, p. 213), he states that he would have been a *financial* gainer if he had kept his system to himself, and I, for one, fully think that if bee-keepers carry out his instructions and advice, published in the B.B.J., they will not be disappointed, seeing that Mr. Wells has done so well. I have no doubt that a number of your readers would like to have a whisper from some of our Yorkshire bee-keepers. I think in the majority of cases it will be feeding, not taking sections off. I saw in your Journal that a Tadcaster gentleman was going in rather largely for bees; perhaps he will take up his pen and let us know the conditions of honey gathering in his apiary.

If Mr. Rothery is as open in his intentions as Mr. Wells, he will, through your columns, let us know how he worked his double hive. If my memory can run back to four years ago, he said he had not tried the double system; and later than that, I fancy, if he is one and the same gentleman, he has stated that he has not tried it.—Hawk Eye, *Tadcaster.*

EARLY SWARMS.

[1879.] The earliest swarm of 1894 I have heard of in this neighbourhood was from a skep at North Frith on April 10; the next earliest at Dunk's Green on April 17. The weather here is cold, dull, and rather wet; not much prospect of surplus honey if it continues so, and very much against getting anything for the Canterbury show, which I gather from the schedule is open to all the world—at least, there appears to be no separate classes for the Kentish members, who will thus be placed at some disadvantage.—Ignoramus, *Tonbridge.*

BEES DWINDLING.

[1880.] Your correspondent, Annone (1046, p. 206), asks the cause of bees dwindling. I suggest it was either loss of queen, or else the queen was a drone-breeder. The grub in royal cell would probably be a thick drone-grub produced from the egg of a fertile worker, or a drone-breeding queen. The weather and scarcity of food would account for the few grubs or drones in the hives; perhaps the bees cast out dead in spring were small drones raised in worker cells, and shortness of food caused the bees to kill them, which feeding would stop.—J. R. Truss, *Stamford.*

REMOVING BEES FROM TREES.

[1881.] Like your correspondent, W. Adams (1869, p. 215), I have also a very strong stock in view. Could one not drive them, fix a skep over hole, and use a mallet, if necessary, to obtain sufficient jar through the thickness of the tree. What do you think, Messrs. Editors?—Mouche-à-Miel, *Wolverhampton.*

[We can hold out no hope of success in any attempt to "drive" bees from a tree in the manner proposed.—Eds.]

Queries and Replies.

[1061.] *Transferring Stock to "Wells" Hive: Dividing for Queen-raising.*—I have a very strong stock in a two-story hive (twenty standard frames), with no excluder between, so that nearly every frame is well filled with brood. There are also several new queen-cells formed. The hive is a very old one, and I want to transfer them to a new "Wells" hive, and divide the stock by putting the bulk of brood and a queen-cell in one compartment with about half the bees; and in the other putting the queen, the rest of the bees, and the frames with the least brood. If this plan is not feasible, what had I better do?—BAILDON.

REPLY.—If the stock is so strong as stated, the transfer may be safely performed without risk. It is not quite certain that the lower chamber will be found so full of brood as imagined; but in any case the combs containing such, from both upper and lower chambers, should be put close together, so that the bees will form a continuous cluster, divided in centre by the thin perforated dummy only. After selecting the best queen-cell, the others should be removed if swarms are not desired. A sheet of foundation inserted in the division where queen is left would also tend to lessen the chances of swarming.

[1062.] *Sectioning Skeps for Beginners.*—From reading the BRITISH BEE JOURNAL, which I see weekly, I have commenced to take a very great interest in bee-keeping, and have consequently become the possessor of a swarm which were hived in a skep just a fortnight since. For a week I fed them; now I observe they are particularly active, notwithstanding the unfavourable weather, and are carrying pollen in great quantities. During bright sunshine to-day I almost expected them to swarm! I find skep has no hole on the top, and I write this to ask—1. What course I can adopt to get if possible some nice section honey from my bees this season, and how I must set about it? This is my first possession of bees, and I shall feel grateful for any information how to proceed with them. 2. I have an empty combination hive with frames and sections; can I utilise this by putting skep on frames filled with foundation? I am afraid to attempt driving.—M. P. HEALE, *Crediton, June* 2.

REPLY.—1. It will be necessary to cut a circular hole in the skep before fixing thereon a "skep section rack," which can be had from any dealer in bee-appliances. Some care will be required in fixing the rack firmly on dome shape of skep, in order to prevent its being blown off or capsized, and it would be well to procure one of the pattern with sides fitting down over the skep. In Messrs. Neighbour & Sons' Catalogue several patterns of skep crates are illustrated. 2. By proceeding as proposed, the bees might during the season work their way into the lower hive for breeding, in which case the skep would be used as a store-room for surplus honey, but no sections would be got in that way this season.

[1063.] *Drone-breeding Stocks.*—One of my stocks of bees lost its queen early this spring. I gave two frames of eggs and brood from another hive for the bees to raise another queen from, and to-day failed to find a queen, but I found eggs in drone cells, also drone brood, but none in workers' cells. 1. Will this prove a fertile worker to be laying? and, if so, 2, would it be safe to unite a swarm to the stock? There are full five seams of bees now.—W. NOTT, *Albrighton, June* 2.

REPLY.—1. If no queen is present a fertile worker must be. The combs, however, will show by queen cells whether a young queen has been raised from the eggs and brood given; if one has been so raised she will have missed mating in consequence of the late adverse weather, and consequently be a drone breeder. 2. It will not be safe to unite a swarm to the drone-breeding stock without taking precautions to prevent the bees of the latter attacking the swarm. They should be removed from the combs into a skep, and after the swarm has been hived into the frame hive, be thrown out in front, and allowed to run in along with the last of the swarm.

[1064.] *Increasing Stocks.*—1. I had a swarm from a straw skep on May 13 which was hived on seven full sheets of foundation, and has been fed slowly ever since. When looking at them on the 25th I found one frame had brood both sides, and, desiring a few more stocks, I ask do you think it possible to make them throw off a swarm this year in time to build it up for winter, or would it be best to try for surplus honey, and not a swarm? 2. I have "Cowan's Guide-Book" and "Honey Bee." Will you please tell me the next best work to obtain, and the price and publisher of same? 3. I thought of getting two or three Italian queens from Silvio Galletti, who advertises in B. J. Will it be the proper way to send a cheque for the amount stated in B. J. direct to him, or could I send it on to you for forwarding to him? 4. What is your opinion of Italians—are they as hardy and good as the English?—IGNORAMUS, *Tonbridge, May* 29.

REPLY.—1. It is not at all likely that the bees will swarm this year under the conditions stated; but the stock, if strong, may be divided about the middle of July into two, or perhaps three, portions, and, with attention, all three be got into condition for wintering. It is for you to say whether increase or surplus is best for your purpose. 2. The books you already have should be sufficient for all purposes, if carefully studied. 3. A foreign money-

order (not cheque) should be sent in payment. They may be had at any money-order office. Cash for Mr. Galletti must be sent to him direct. 4. Good Italian queens are highly thought of by many experienced bee-keepers; but, as "Sairey Gamp" says, "comparisons is ojus," so we do not care to make them.

[1065.] *Honey from High and Low Lands.*—1. When bees collect honey from similar plants, where do they gather the best quality from—high land or fen land? 2. Admitting that the extractor is by far the best means of removing a larger quantity of honey from the combs, still sometimes when wanting a small amount of run honey I have used an ordinary flannel jelly bag, but, finding that the wax adheres to the flannel, I ask, Is there a better substitute or a better way?—J. P. Fison, *Horningsea Ish, May* 29.

Reply.—1. The finest honey is gathered from the highest altitudes. Low-lying, damp, fen land is usually supposed to be the least suited for honey gathering. 2. We should prefer to use a fine wire strainer to a jelly bag, but there is a small extractor in which the honey is removed by centrifugal force—very useful for extracting from small pieces of comb, up to 4½ in. square, which only costs 3s. Messrs. Abbott Bros. are the makers.

Bee Shows to Come.

June 7 and 8.—Wilts Agricultural Show at Devizes. The Wilts Bee-keepers' Association will attend as usual. No prizes. For particulars apply to W. E. Burkitt, hon sec., W.B.K.A., Buttermere Rectory, Hungerford.

June 12 to 15.—Royal Counties Agricultural Show at Canterbury. Hives, honey, &c. Secretary, Bee Department, John Huckle, B.B.K.A., King's Langley.

June 13 and 14.—Essex B.K.A. at Colchester. Entries closed. Post entries at double fees. Fifteen open classes. Hon. secretary, F. H. Meggy, Chelmsford.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries closed. Secretary, John Huckle, B.B.K.A., King's Langley.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances. Liberal prizes. Entries close June 29. S. Upton, secretary, St. Benedict's-square, Lincoln.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

May 26.—Notts B.K.A. Annual County Show at Southwell. Entries close July 19. Secretary, A. G. Pugh, Mona-street, Beeston, Notts. Other shows connected with the Notts B.K.A. will be held as follows:—Lowdham, July 19; Hucknall Torkard, July 24; Beeston, August 6; and Moorgreen, September 4.

August 1, 2, and 3.—At Beverley, Yorks. Prizes for bees, honey, and appliances. Entries close June 23. Marshall Stephenson, secretary, York.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Inquirer.—Bees sent are drones, which, so far as can be judged, have been soaked in water or else drowned before sending. Instructions for using Naphthol Beta in bee-food are sent with each packet.

D. O. Harrington (Reading).—1. Yes, they are eggs. 2. Swarms usually build more or less drone-comb if left to themselves, so there is nothing wrong about what you have observed. 3. Certainly, candied honey may be given to bees as food, but when melting or liquefying a little water should be added to thin it down somewhat.

F. (Leeds).—A mere inspection of the dead bees received gives no clue to the cause of death. Only an inspection of the hive or a personal knowledge of the circumstances can do this. It may, however, be said that the fact of dead bees being found as stated is not an infrequent occurrence, from which no appreciable bad results follow. And it not seldom happens with strong hives.

Alf. Wolfe (Taunton). — *County Council Grants to Bee Associations.*—All the information we have on the subject has appeared in our columns, and we trust our correspondent will himself refer thereto for what he requires.

Elihu Clowes (Newcastle, Staffs.).—As to the sample received being "genuine *English* beeswax," that is a point no one can positively decide, but for the rest, the sample is beeswax of excellent quality, and one regarding which we have no hesitation in saying that—according to our judgment—it is perfectly pure.

John Chapman (Romsey).—Of the four bees sent three are queens, the other a worker. 1. It is not probable that more than one queen will remain in the hive so long as the bees are not separated. The fact of two queens having "lived at peace with each other" is one of the curious things in bee-life which do happen occasionally. 2. Yes. 3. Yes, the bees will now settle matters in their own way.

D. ANTHONY (Cardiff).—No trace whatever of foul brood in comb sent, only old dried-up pollen.

THOS. H. METTUM (Acock's Green).—*Brood from Second Swarm.*—1. The probability is that the fertilisation of the young queen has been delayed by the late adverse weather. If eggs and brood do not appear a few days hence, then you may fear a mishap. But why not search for the queen on the combs? 2. When weather is favourable eggs are usually found about the time stated—ninth day after hiving. Queens always select a fine day for the mating flight. 3. Queens are found by searching the combs over carefully till she is seen. Search should not be made for her on cold days. 4. Leave matters for a few days longer, and if no eggs appear a comb of brood should be given from one of your neighbour's hives. 5. Only a "turn-out," which often occurs.

PERCY H. GRAY (Herts).—*Oak Floor-boards for Hives.*—We should regard the statement that oak floor-boards will cause the death of bees as "an old woman's tale," unworthy of a moment's thought.

A BEGINNER (Cambs).—If the "slightly fermented" honey is heated to almost boiling-point by immersing the jar containing it into a pan of water, it may be given as food to bees at this season, adding a very little water to thin it slightly.

F. B. J. (Ilkley, Yorks).—1. Comb sent is perfectly healthy, but queen evidently worn out, and a drone breeder. 2. So long as young queen took no harm from the returning bees of the stock on whose stand she was placed, your plan of procedure will be quite satisfactory.

G. S. (Market Weighton).—*Bees Casting Out Immature Drones from Swarmed Skep.*—1. The bees cast out are immature drones; it is not an unusual occurrence, but the skep might have a little syrup food given with advantage, as it betokens "short stores." 2. Bee sent is the common or native variety.

OWEN WELSH (S. Devon).—*Foodless Hives after Swarming.*—The only explanation that can be given of the state of things discovered after the issue of swarm is the very untoward season and the consequent absence of honey in the flowers.

Several Letters, &c., are in type, and will appear next week.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

FOUR STRONG STOCKS of ITALIAN BEES. Guaranteed strong and healthy. 45s. each. E. OWEN, Devonshire Villa, Grove Park, Chiswick. E 10

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100 Latest *Bee Journals* and 13 *Records*, 2s. 6d. lot BADOIS, Grange-road, Egham. E 12

Prepaid Advertisements *(Continued).*

ON SALE, a MANIPULATING TENT, in good condition. For price and particulars, Mr. ISAAC BUSH, Beechfield Nursery, Bowdon. 223

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

"YE OLDE ENGLISH BEE."

PRIME natural Swarms of my selected strain of the above, headed with 1893 Queens, carefully packed, and put on Rail, 15s. each. The ungenial weather during May has made the swarming season unexpectedly late. Customers may rely on every effort being made to fill orders as promptly as possible. W. WOODLEY, Beedon, Newbury.

Porterage on Telegrams, 1s. 6d.

MARKET for RUN HONEY (new and old), SECTIONS (any quantity), and WAX. State price, &c. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, London.

HOP ALE, sparkling, refreshing, made for 3d. gallon. Recipe 7d. TURNER, Limpsfield, Surrey. E 14

WANTED AT ONCE, strong stock pure CARNIOLANS, '93 or '94 Queen. Send particulars and price to B., Bradford Club, Bradford, Yorks. E 13

FOR SALE, natural MAY SWARMS in straw hives and on standard frames, ready for immediate delivery. Orders booked for June swarms. LINSTEAD, Garboldisham, Thetford. E 16

A FEW QUEENS FOR SALE, mated in May and now laying, price 3s. 6d. each. H. W. BRICE, Heathfield Villas, Beulah-road, Thornton Heath, Surrey. E 15

HONEYCOMB DESIGNS.—"V R." cannot fail to please you. Post free, 4s. 6d., with instructions. CHARLES COX, Brampton, Northamptonshire. E 7

SPLENDID HIVES, on the W. B. C. principle fitted complete for use; strongly made; no extras, 18s. Combination Hives, 10s.; Champion Hives, 5s. 6d. (All made of pine). Particulars on application. C. MORREY, Five Ways, Neston, Chester. E 5

BEES.—FOR SALE, several NEW SWARMS of this month for SALE. Apply to the GARDENER, Kewhurst, Bexhill, Sussex. E 8

HONEY and BEESWAX, valuable recipes for use of; 10s. per 1,000, four a penny. Will increase local demand. Vendor can print or stamp own address on. GEORGE STOCKS, Sandiway, Northwich. D 100

FIRST SWARMS of my splendid strain of BEES, which cannot be excelled, 15s., packed free. JOHN WALTON, Honey Cott, Weston, Leamington. D 95

PURE ENGLISH BEES, splendid strain, swarm early, good gatherers. Small swarm with queen, 5s., larger, 10s. 6d., superior, 15s., nuclei, 5s., all on rail; queens, 3s. delivered. ALSFORD, Expert, Blandford. D 98

GUARANTEED Healthy Natural SWARMS, ready for delivery, 3½ to 4 lbs. each, price 12s. 6d. Packing included. 1s. each allowed for boxes returned. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. R2

BEES, NATURAL SWARMS, healthy and strong, free from foul brood, 10s. 6d. each, boxes 2s. 6d. if not returned. E. LONG, Cottenham, Cambs. D 87

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

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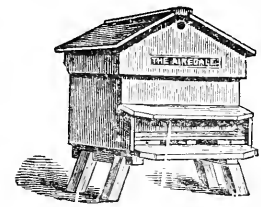

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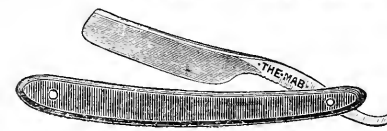

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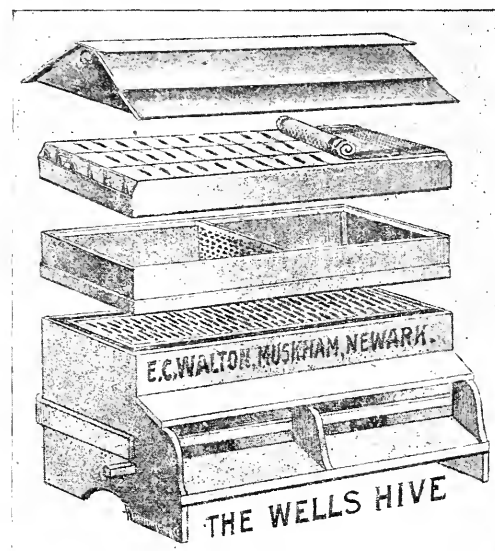


Editorial, Notices, &c.

COMB FOUNDATION.

HOW IT SHOULD HANG IN FRAMES.

Referring to the allusion to the above subject in BEE JOURNAL for May 24 (p. 201), we have received the following communications :—

DEAR SIR,—I am greatly surprised at the very positive statement made in the BRITISH BEE JOURNAL and *Record* on the above subject. That there is a difference of opinion I am aware, but that either way is a distinctly right or wrong way I am not prepared to admit. Years ago I gave months of most careful attention to this subject, and my conclusions were the exact opposite to those you have arrived at. Practical experiments, tried in my own apiary, led me to these conclusions, and theory had nothing to do with it. Many hundreds of sheets of foundation were tested under exactly equal conditions, and in no case did sagging or breaking-down occur in those sheets having top and bottom cell walls horizontal, as in your diagram No. 2, whereas (with swarms especially) both sagging and breaking-down did occasionally occur when the cell walls were as shown in your diagram No. 1. So great did I think the advantages of the No. 2 form, that I had foundation mills specially made to enable me to turn out foundation in this manner, and my mills turning out pattern No. 1 have been idle ever since. We must bear in mind that the strain in a comb is a pulling strain, not a crushing strain, and the flat top to the cell is better adapted to resist this particular strain than is the arch top—this latter being more adapted to resist a crushing strain. Now let us see what the bees do when they build their combs naturally, without the aid of foundation. I had looked to this years ago, and then decided that they built their cells both ways in about equal proportions. To-day I examined four colonies. The first has three newly-built combs. Two of these have the cells arranged as in diagram No. 2, one has the cells arranged as in diagram No. 1. The second has three combs as in No. 1, one comb as in No. 2. The third has three combs as in No. 1, three combs as in No. 2. The fourth (an old stock) has five combs as in No. 1, three combs as in No. 2. I send you, with this letter, one of the combs naturally built as No. 2. — Yours faithfully, THOMAS B. BLOW, *Welwyn, June* 5, 1894.

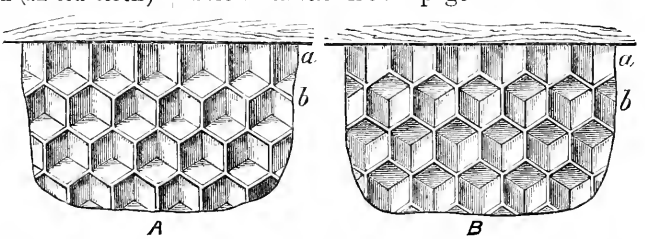
The second letter is as follows :—

GENTLEMEN,—I feel obliged to express dissent from your dictum respecting the natural formation of the bees'-cell as expressed in your "useful hint," p. 201, on "fixing foundation in hives." When reading the paragraph, there happened to be lying on a table near to hand a piece of newly-built natural comb, which I took up that I might the better follow your remarks ; but, singular to relate, I found the cells built quite the opposite to what you say they ought to be. This naturally stimulated further inquiry, and, by observations I have made, I find that the bees build cells indifferently in either position. As any bee-keeper has it in his power to satisfy himself on this point, I need say no more. I simply state the result of my particular observations.

Your deductions respecting the form of the cell and the equilibrium of arches are very pretty, but for all that by no means acceptable. The arch is only adapted to resist compressive forces upon the *extrados*, but, bearing in mind that the combs as built by the bees are suspended from above, and not supported below, the forces tending to produce rupture are tensile, and to resist such strains the arch is absolutely unfitted.

Leaving philosophy and coming to the practical point, I am of opinion that if there be a right and a wrong way of fixing foundation in frames, it is a matter for manufacturers of foundation to attend to, and adopt a uniform plan. Bee-keepers are, in a measure, obliged to use the article as it comes to their hands. I make this remark because a sheet of foundation now before me is impressed with the cells the contrary way to what you lay down as correct.—Yours faithfully, A. DONBAVAND, *Whitby Heath, Chester, June* 5, 1894.

If our esteemed correspondents will refer to the chapter on comb construction in Cowan's "The Honey Bee," they will find the question respecting cell construction fully treated therein on pages 183 and 184. That bees do build combs naturally at any angle we freely admit, but in the majority of combs, when left to themselves, they endeavour to commence them in such a way as to have parallel sides hanging vertically. In this case the first row of cells is, as represented in the diagrams (*a*) and (*b*) below taken from page 184 of "The Honey Bee," and the cells have five sides, one of which is formed by the



surface of the top bar to which they are attached. We will now allude to the practical bearing of the matter, more especially with regard to comb foundation, for it is here that it most concerns bee-keepers. It is not simply a difference of opinion, but a practical matter of fact, and we were sorry to have to differ entirely with Mr. Blow, for our experiments have long ago proved to us the very opposite to what he states. We were amongst the very first to use comb foundation, long before the B. B. J. was established, and had to face the problem of both stretching and sagging foundation. Our experiments were carried out with different makes of foundation, and comparisons were made between sheets made by the same dealers, fixed both as in Fig. 1 and Fig. 2, page 202, B. J. In every instance we found sheets fixed as in Fig. 2 considerably stretched, whereas those fixed as Fig. 1 comparatively unaffected. Moreover, the thinner the foundation the more marked the difference. Without going very deeply into the matter we may say that the proportion of stretching is as 3·5 for No. 1, to 6·0 for No. 2—that is to say, that whereas in a sheet fixed as No. 2 and 6 in. deep the whole of the vertical depth of 6 in. is capable of stretching, whereas in sheets fixed as No. 1, and 6 in. deep, only 3½ in. of the vertical depth is capable of stretching. Of course, we are here alluding to comb foundation fixed without wiring the frames, and about 6 square feet to the pound. Stouter foundation and wiring the frames have been adopted for the purpose of getting over the difficulty of combs stretching. We should certainly not think of using foundation with cells as No. 2, and as recommended by Mr. Blow, without wiring the frames. The strain of the comb is not a *lateral* pulling strain, but a *downward* pulling strain, and it is the parallel sides which resist the elongation, and the arched top that prevents the parallel sides from approaching each other. We therefore have no hesitation in saying that where comb foundation is used without wiring frames the only proper way of fixing it is with the parallel sides vertical, and if only such foundation was made we should hear little or nothing about stretching. The same remarks apply to sagging, against which the arched cell offers the greatest resistance.

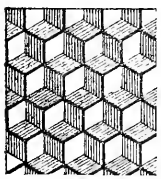


Fig. 1.

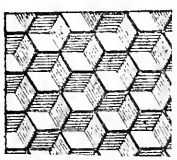


Fig. 2

BRITISH BEE-KEEPERS' ASSOCIATION.

Arrangements have been made for holding a meeting of bee-keepers in the show-yard at Cambridge on Wednesday, 27th inst., at three o'clock. The Royal Agricultural Society have kindly granted the use of their council tent for the purpose. Bee-keepers wishing to be present, and being desirous of bringing forward any subject for discussion, will kindly communicate with the Secretary, John Huckle, King's Langley, Herts.

We are very pleased to learn that the Shropshire Bee-keepers' Association has contributed £5 to the funds of the British Bee-keepers' Association.

THE BEE VAN.

The latest outcome of County Council grants in aid of technical instruction in bee-keeping, to wit the "Bee Van," by means of which energetic and earnest propagandists are working in the good cause are already in evidence for the season. The van—or vans, for there are two of them—of the Hereford and Berkshire Associations respectively, accompanied by the experts, have started "on tour," and, we hope, will meet with large and appreciative audiences of the villagers for whose benefit the work is being done. The hon. secs. of the associations referred to have favoured us with copies of the bills distributed in advance in such districts as the van passes through, giving a full programme of the day's proceedings, and the arrangements detailed could not well be improved on.

Both bills are drawn on the same model, the work of each day beginning at about four p.m., with an afternoon lecture and demonstration whenever possible, and where the use of a convenient apiary or frame hives are available. On these occasions the best methods of handling living bees are shown, the spectators being protected by a net-work screen erected in front of the operator.

At 7 or 7.30 practical instruction is given in the uses of modern bee-appliances and the best methods of bee-keeping. These meetings are more or less conversational, and intended to take the form of "bee-talks" with the audience — questions being invited and answered. Then at 8.30 a short lecture is given from the platform of the van and illustrated with photographic-lantern views shown on a screen fitted in rear of the van.

Not a bad day's work, it will be admitted, but not quite all, for we read with much pleasure the following footnote attached to the programme :—"The expert is also instructed to render practical advice and assistance as far as possible to all bee-keepers on or near the line of route. All instruction given on this tour is absolutely free and open to all, and no fees are permitted."

A pleasant and profitable time to the Bee Vans, and may their number increase say we, and no doubt our wish will be echoed by all right-minded bee-keepers.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" (*see 1st page of Advertisements*).

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

HONEYCOMB IN SECTIONS.

HOW I PREPARE FOR PRODUCING IT.

[1882.] Those among us who remember honeycomb cut out of bell-glasses and large supers somewhat regretfully leave these on the shelf and take to the modern section. To keep even with the times, we must produce honeycomb in this portable form, and it must be good in quality, clean, and cheap, if we are going to persuade the public to use honey for food as well as medicine. No doubt it is very pleasant and profitable for the bee-keeper to get one shilling per section, but if we bee-keepers had to pay that price how many sections should we buy in a year for our own consumption, considering most of us could, and would want to, eat one for tea? After trying all sorts and sizes, we have decided to use no other than the standard 4¼ square two bee-way section, and we insist on having the very best quality obtainable, these being pleasant to look upon when empty, but, when filled with clover honey, perfectly irresistible! The four bee-way section I have personally discarded because it was almost impossible to handle them without breaking some cappings, when leakage utterly spoiled them, neither did I find them better filled than the others. The latest improvement is to make them thinner. This, like the "four bee-way" is in my view a retrograde step.

When sections are received from the London Docks the cases are made dust-proof, and are stood in a dry room. About the beginning of April I proceed to make them up. Nothing is gained by doing it earlier, for besides the extra space required for storing they will be sure to get dusty, the foundation will become hard and scentless, and where full sheets are used (as here) many will develop flaws and break down. The same may be said of frames —wired or unwired. I tie about twenty sections in the flat tightly together with the V grooves all running the same way; these are laid down slanting, so that when the scalding water is poured into the grooves it quickly runs through, so toughening the wood that not one in a hundred will break. The mitred ends are left dry. I now have ready some of the best glue it is possible to get—being withal light in colour and exceedingly tenacious — and large boxes to contain the made sections. I bend and hammer the sections together, forcing them lightly into the square form as much as possible; then hand them to my assistant, who pulls the mitred end apart, inserts a little glue, presses them together again, and places in the box. When the latter is full the whole lot is wedged together against the sides, weights are placed on the top, and when dry the sections come out perfectly square. Thus we do a great many in a short time. Now comes the foundation process. There are many ways of doing this, such as fitting into a grooved section (I pity those who have to cut the foundation), or pressing the upper edge of the foundation into the wood, which throws it out of the perpendicular as soon as the bees cluster upon it (but nothing to matter particularly); or it may be fixed by slitting the bottom bar, which then becomes the top, into two pieces, laying the foundation against one, then closing the other. The last is the worst of the lot, for besides getting the bottom of the section to the top, thus showing the unsightly mitred edge on the one side, and the slit with foundation in the centre, there must be two separate pieces to glue, and if full sheets are used, sagging I think would be certain. After many years' experimenting, I still use the block and melted wax. By practice it is possible to do them very quickly. Everything is got ready first, a board is marked so that three cuts with a knife makes eight squares of foundation the proper size. All that is wanted is then cut. Wax is melted in a pot—within a pot—and I use a bent spoon —our wax-smelter having been sent to the British Museum. The wooden block is boiled to prevent wax sticking to it. Then I take a section, insert the block, place the foundation against, it and run a little wax along the angle; next place the middle finger—which was evidently made on purpose — against the foundation, take out the block, and run a little more wax along the other side. Then, fair—or plain—reader, set them on your hives and trouble no more, for not one in a

thousand will ever break down. Cases holding twenty-one are used, also wooden separators in preference to zinc, as being so much warmer. The bees, however, gnaw the edges of these to such an extent, and so many get broken, that I am sorely tempted to overlook that one fault, and use the zinc ones in future. The fact of the bees taking to these cases and filling them with exquisite honeycomb is one of the wonders of modern bee-keeping. How pleasant to go to the modern hive and, lifting up the full case, place a clearer underneath, which automatically, as it were, empties it of bees! How pleasant to take it into the honey room and take out the sections one by one, knowing there is no danger of one breaking because of our best glue, and all clean except for a little propolis! Before sending to market a thin shaving is taken off the edges of each one with a sharp knife. This is a little trouble, but is fully repaid by the extra cleanliness obtained. Years ago I always worked a score or more glass sections, the four pieces of glass being fixed to the inside of the wooden section by bits of tin, until filled, when the comb kept the glass together. These were much admired, and we should work some now but some one was supposed to have patented them, and I gave them up in consequence.

Soiled sections—every bee-keeper has some—make capital nail-boxes, six being fixed in a shallow box, or a bottom of wood nailed inside each one. Cut up, they are very useful as plant labels or tallies. Scores of them at work might be seen by some enterprising interviewer if he could find his way into the back regions—where bees hum and cats sing—of the demesne where dwells—LORDSWOOD.

HELPING COTTAGERS.

HOW A HANTS COTTAGER SELLS HIS HONEY.

[1883.] Seeing that your correspondent, Mr. Routh (1864, p. 212, May 31), is desirous of helping cottagers and working men who are bee-keepers, I beg to say I have always sold the whole of my honey without much trouble, and being one of the same class I am very pleased to say how I do it. As soon as I take off my first super of honey I put up a notice on the wall of my cottage in large letters "Honey for Sale," and stage some of it in the window, so that passers-by can easily see it. I also send round to houses near, and my sister, when only twelve years old, has herself in a small town near sold £2 worth in one day. Many cyclists riding by have stopped on seeing honey in the window, and become purchasers; some of them send regularly every year from London for several pounds. Last year I staged 140 lb. in sections, bell glasses, and bottles at the local show. It gained first prize. I brought it home and staged it up in my cottage window the same as at show, and sold the lot in about a week. Let it be known that you have good honey for sale, and, after buying once, purchasers will be sure to come again. Do not ask or expect too high a price, for the day of 1s. 6d. per lb. for honey has gone by, although some of our bee-keepers expect that price now. Mine averages about 8½d. per lb. In this way I have sold 7 cwt. in one season, and have almost got into hot water with the good wife because of so seldom having any for our own use, for it is a rare thing to have a pound left after October.

I have this year increased my stock of bees, and hope to get twice 7 cwt., and I have no fear of being able to sell all I get. The weather, however, is not at all favourable for honey-gathering at present. I think that the County Association honey labels should help to sell the honey of those who are not good hands at making a market for themselves. That we may all have plenty of honey, and more customers than we can supply is the wish of—H. ROWELL, *Hook, Winchfield.*

REMOVING BEES FROM TREES.

[1884.] I see in this week's JOURNAL (1881, p. 226) a question about removing bees from trees.

I and my man removed some two years ago successfully. The bees entered by an opening a little distance up the trunk, and the night before removing them we nailed perforated zinc over the hole, thus making the bees prisoners. We then sounded the tree to see how far up it was hollow, and then bored a hole with an augur large enough to take one end of a lamp-glass. The first hole was too low; but our second attempt was more successful, for we came to the new-made comb; we then plugged up the holes for the night.

Next morning we took down a skep-hive, securely corded to a floor-board, and we first slung the hive to a small branch of the tree above, then placed one end of the lamp-glass chimney in the hive, and after removing the plug in the tree fixed the lamp chimney to the hole: then commenced to puff in smoke through the hole covered with zinc. For above an hour we thought we should not succeed; but at last the bees, becoming tired of the smoke, began to work their way through the glass, the queen being almost the last to leave the tree and enter the hive.

As "Hawk-eye," Tadcaster (1878, p. 226), infers, we Yorkshire bee-keepers have not all been so successful as Mr. Rothery in gathering surplus honey. Although only nine miles further down the Wharfe, and in the midst of plenty of bloom, I have been obliged to feed my bees. Although, when the winter was over, my hives were well stocked with honey, if the weather had been in any way favourable I should not have had to feed; but my hives are all large, and well stocked with bees, but we have had no swarms yet.

I had a honey-box made last year something like the one shown on p. 225, but a little deeper, and at the bottom of each com-

partment is a little square of oiled butter-paper filled with paper shavings, and sealed up so as to prevent litter. On the top I have a large square the size of the box packed with paper shavings, so that it holds the bottles tight; but we put the corrugated paper round each bottle, as Mr. Woodley suggests, and on the top is a strong wooden handle, so that the box cannot be set the wrong way up.—(Miss) Helen Laurence, *East Keswick, near Leeds.*

REMOVING BEES FROM TREES.

[1885.] I notice your correspondent, W. Adams (1869, p. 215), in Bee Journal of May 31, inquires as to taking stock of bees from trees. Having taken four or five lots from hollow trees, my plan may be of use to him. First, with centre-bit bore four or more holes round the entrance, something in the nature of a square, so as to have it nearly a foot each way. Then run a fine saw through from hole to hole, and the piece of wood so sawn can then be got out. Next bore a hole in back of tree, and use the smoker; by this means he will cause nearly all the bees to take wing; he can then insert his hand, and with the help of a knife take out the combs one by one, and tie them in his frames. Of course, it must be understood the queen will not take flight, and on finding the comb on which the queen is seen he can then drive out the few bees remaining in tree. Replace the square of wood at the entrance, stopping up the holes and also the one at back of tree with clay. The flying bees will join the queen in the frame hive, and he can remove it when they are settled down and quiet in the evening if its future location is two or more miles away. Otherwise it should be left near the tree till the end of season. If the above plan is carried out with ordinary care and courage, I think he will get his bees, as I have done, and have yet to learn what the word fail means so far as this job goes.

I am sorry we are having so much wet weather just now, as hives here are all crammed with bees, and cannot do much for want of sunshine.—Thos. Adams, *Ely, near Cardiff, June 4.*

BEES IN LINCOLNSHIRE.

[1886.] I had a note, June 8, from a second-class expert, who says:—"It is wretched bee weather here; stocks are dying of starvation where they are not fed. I was at Mr. ——'s last evening, and transferred the bees from his two boxes to frame-hives. In both cases there was not a drain of honey, and in one box the bees were too weak from starvation to even fly. I had to give warm syrup to move them. No unsealed brood or eggs in either stock, and all drones killed off. He is now feeding all his stocks." I fear the above account will illustrate what things are like here. Swarming was very early, and in skeppists' apiaries I am told that some swarms are already dead from starvation. Not a very bright look out!—R. Godson, *Alford.*

Queries and Replies.

[1066.] *Hiving my First Swarms. — How to deal with Them.*—My first experience with a swarm occurred to-day; it came off about 12.30, and rose in the air in the vicinity of the hive; then, after a short time, the outside of the parent hive became densely covered with bees, small clusters forming here and there, and large ones under the porch; so I thought I had better get them into a skep, which was done in the usual way, but they did not remain there, for in a short time the bees returned to the hive they came from. I can see now that I was too hasty in interfering, for, on walking in my garden at 6.30, I saw a tiny cluster of bees hanging from a twig of an apple-tree, about the size of an ordinary hen's egg, which I removed, twig and all, and, as expected, found the queen there. I put her in a long queen-cage, with a few workers, giving a supply of "Good" candy at the bottom, and placed it between the quilts of a strong stock. The swarm came from a stock purchased on six frames early in April. How can the queen be turned to best account? Shall I form a nucleus from this hive, letting her preside, or make an artificial swarm and join her to it? Another swarm will come from the parent hive shortly, will it not?—T. W., *Cheltenham.*

Reply.—Unless there is some special reason for preserving the old queen, we should not trouble either to form and nurse a nucleus colony, or to make an artificial swarm in order to save her life. She will most likely now be in her second—if not third—season, and consequently will need "replacing" in autumn. It will, therefore, be best to discard her and preserve the young queens now being reared in the parent hive, if more than one additional stock is desired. The whole swarm having returned after missing the queen, what is practically a "top swarm" and second swarm combined will issue, headed by a young queen, after the usual interval of eight or ten days, and if you can manage to divide the combs and brood of the parent hive into three lots—dividing the bees also—giving the young queen to one and a just-hatching queen-cell to each of the others, three stocks may be formed. On the other hand, it will be safer and much more simple to be content with two, in which case only the ordinary procedure will be needed.

[1067.] *Suspected Loss of Queen.*—On Whit Monday, May 14, my only stock swarmed. I hived them in a "Gayton" on eight frames, and they are doing well. On May 24 a second swarm, weighing 4½ lb., came out, and not

wishing to increase my number of stocks I returned the swarm, after cutting out the queen-cells. Had they not come out of the hive I should never have thought they could have gone in, so numerous were the bees; but they did, and I put on a crate of sections to give them more room. Acting on the advice given in "Useful Hints" in this week's JOURNAL, I examined the hive last night, June 8, but failed to see the queen, and not a sign of brood of any sort. Do you advise procuring a new fertile queen for them, as I have no queen-cells to give them? There is sealed honey in the upper portions of the combs, but the lower portions are empty. The bees are in the super, but do not appear to be working.—THOMAS H. PRINGLE, *Westcombe Park, S.E., June 9.*

REPLY.—We should defer giving another queen for a few days longer, the weather has been so bad of late. Mating may either have been delayed, or the young queen may still be in the hive and eventually prove a drone breeder. So soon as you can be quite sure there is no queen introduce one, but an alien would be killed if introduced while the young one is in the hive.

[1068.] *Excluder Zinc and other Hive Details.*—1. In using sheet excluder in "W.B.C." hive is it practicable to cut and fix it to lie within the walls so as not to enter any joint between brood and super-box? In the width there is no difficulty, the edges overlapping the dummies or end frames with their slips, and yet being kept clear of side walls; but lengthwise the zinc would have to be cut, placed, and secured, so that no queen-space is left between its edge and the tin ends of frames, and yet clear of the inner walls of super-box lying over frame ends. I think the zinc could be cut $\frac{3}{16}$ in. less than the $14\frac{1}{2}$ in. distance apart of walls, and that with accurate boxes it would be practicable and safe. I dislike sheet-zinc with its slots and imperfectly true surface entering and spoiling perfect joints. 2. Do you deprecate the use of any excluder zinc which has slots perceptibly less in width than the "B.B.J." pattern by test with gauge? 3. Does oilcloth quilt on supers retard evaporation and sealing of honey, and sufficiently so to make preferable the disadvantages of a pervious quilt, *i.e.*, the gnawing and propolising work caused thereby? 4. Do you see any practical objection to trying "W.B.C." hanging section frames in shallow frame boxes, the extra depth of box being filled by a loose $\frac{3}{8}$ in. wood grid laid on the lower frames and allowing the shallow frame box to fit easily over it? The grid placed with its bars at right angles to frames might prevent brace combs.—F. S., A LANCASHIRE NOVICE, *June 9.*

REPLY.—1. We do not think there would be much difficulty in cutting the zinc to secure the end desired, but we prefer the edge of surplus box to lie on the zinc all round and so keep it firmly down and rigid. If the junction is packed carefully as we have described, there need be no appreciable escape of heat. 2. Yes, to lessen the width perceptibly will obstruct the worker bees. 3. Personally, we always leave the ordinary cover of American cloth on surplus chambers containing combs for extracting, and have found no disadvantage in so doing. With sections it is somewhat different, and propolised covers are apt to soil the wood; but it is only on that account that a clean porous covering of ticking and felt is used. 4. It might be useful to try the plan proposed, but we have no experience to warrant us in saying how it will act.

[1069.] *Bees destroying Queen-cells.*—1. I am sending you a bee, and would like you to tell me if it is a young queen. Yesterday, June 7, two hives beside each other swarmed together, both settling on a tree—one at the top, the other below. We put them into skeps till the evening, when we found both swarms had gone into the same skep. On being shaken out and driven into a hive, we found two queens and the enclosed, which was at once stung to death by the bees, and the other young queen was being "balled," the old one passing in unmolested. During the day a good many bees had been killed. 2. I should also like to know why a nucleus tore down and destroyed queen-cells? I gave them a frame with three cells, from same hive as the bees, and all the cells were destroyed, and the bees are quite contented, and all the young brood has hatched out, but, as they have no queen, they are now preparing queen-cells when no use. Is it usual for cells to be destroyed if put in with the bees?—H. H. WOOSNAM, *Newton Abbot, June 8.*

REPLY.—1. Bee has not yet reached us. In hiving the swarms you have managed to get both queens into the same skep, hence the bees uniting of themselves in that one. 2. Other conditions being right, it is not at all usual for bees to destroy queen-cells from their own hive after dividing it into nuclei. You should state exactly the conditions under which the nucleus was formed before we can endeavour to explain the occurrence. Any way, they would not be likely to destroy a cell if given now.

[1070.] *Preserving Surplus Queens.*—This week has given me three swarms, one weighing 6 lb.! I have been for a walk through the fields, but did not detect the flower of the white clover. There is an abundance of other flowers in the hay-fields. I should be glad if you could answer:—1. What do the bees gather from the buttercups? 2. Do they gather from the red clover? There is a great crop of it here, but I have never seen a bee on it. 3. I am expecting casts on Saturday, the 16th, from two skeps. It has occurred to

me that possibly you would help me by suggesting how I could best secure the surplus queens in the casts. Would it be best to hive each in a frame hive, and in the evening pick out all the queens but one, and put them into little boxes with air-holes? If I did this successfully, could I not make nuclei, and give a queen to each two or three frames? I want to re-queen this year my ten stocks in bar-frame hives. — ENTHUSIAST, *Stonehouse, June* 8.

REPLY.—1. A good deal of pollen and some honey. 2. In some seasons bees are known to work on second-crop red clover, though we do not think it can be regarded as a honey-producing plant for hive bees. 3. If the queen-cells are easily get-at-able in the skeps, and are carefully removed, they may be hatched out in cages inserted between the combs of strong stocks, but it requires some study of the process of preserving them for use, and dealing with nuclei, as described in bee-books, before success can be ensured.

[1071.] *Sending Artificial Swarms to Heather.*—I propose making artificial swarms from my hives after the clover harvest is over, and then sending the old bees to the heather, some 1½ miles away. 1. Can you suggest any better method? Hitherto I have divided my hives at the end of the honey harvest, and now I don't know much about the ages of the queens. 2. In the case of "Wells" hives, what would be the best method of making swarms?—N. N., *Norwich, June* 8.

REPLY.—1. We should require further details of the plan proposed before we could give an opinion regarding it. Personally, however, we should never think of conveying "old bees" to the heather in bare, foodless hives to take the risk of either gathering surplus or starving, according to the weather, during their stay there. Indeed, it seems to us rather a cruel practice to do so, after the bees have gone through the labours of the main honey season. We should let them go in their stocked hives, and take our chance of further surplus being gathered in sections overhead. Some bee-keepers extract the honey from a few sections, replacing them—dripping wet with honey—along with partly-filled ones for refilling or completion at the heather. Mixed clover and heather honey got in this way makes a delicious "blend." 2. Wells hives are not suitable for making artificial swarms from.

[1072.] *Cheap Wax Extractors.*—In your reply to query 1051, p. 207 of B.J. for May 24, mention is made of "a simple wax extractor on the market which only costs about half-a-crown or so, and does its work well." I will feel thankful if you say in your next issue where this machine can be had.—SUBSCRIBER, *Glanmire, co. Cork.*

REPLY.—The cheap extractor referred to in our reply can no doubt be had from most dealers. From a few catalogues before us, we notice it is mentioned in those of Messrs. Redshaw, of South Wigstone; Meadows, of Syston; and Howard, of Holme, Peterborough.

[1073.] *Making Bees-wax Without Bees.*—Can you inform me of any process (other than by the bees themselves) of making wax from honey, and the cost of so doing? Oftentimes bee-keepers have a quantity of old, rough, unsaleable honey by them, and if it could be made into wax, and so saleable, it would be an advantage.—R. T. ANDREWS, *Hertford, May* 30.

REPLY.—There are, we are sorry to say, no known means of superseding the bee in the manufacture of its own wax; and we may safely assume that there never will be. Modern science does wonders, we know, but the hoped-for "advantage" in our correspondent's query seems to us fairly analogous to hoping for means whereby we may manufacture milk from herbage without the aid of the meek but very useful cow.

Echoes from the Hives.

World's End and Beedon Apiaries, near Newbury.—Another week has passed, and we have had no improvement in the weather. Accounts of losses by starvation, of the early swarms and also of established stocks, reach me, others on the verge of starvation, instead of having honey ready to take off as was the case last year at this time. I am busy feeding every evening, one evening at my out apiary, and the next at my home apiary. The season that opened with so much promise in March and April has been during May and June as disastrous as was the season of 1888. The continued cold, dull, unsettled weather accounts for the emptiness of hives, coupled with the large populous colonies that inhabit them. The outlook is not very cheering at present, but the knowledge, coupled with the hope, that a change in the weather to normal conditions would effect a transformation scene in the apiary, and the dejected feeling as one walks among the hives crowded with a host of workers would in a short time be the centre of activity, and colonies now living from hand to mouth on charity would be revelling in wealth and plenty. Temperature during the past week from 45 deg. to 55 deg., only exceeding 55 deg. one afternoon, when it touched 62 deg.; nearly every hive appeared as if going to swarm for an hour or two.—W. WOODLEY.

Honey Cott, Weston, Leamington, June 9.—The dull, cold weather here still continues, making it bad for the bees, and not promising for the bee-keeper, who, to keep bees in good trim, must dip rather deep into his pocket. Although it has been so cold, we have had some

few nice days, during which I have had about eighteen swarms at home and four from some stocks I have a mile away. I do not think in all my experience that I have seen my hives more full of bees than they are now, and have been more than a month past; many combs are full of brood from top to bottom. The thermometer has been many times down to 43 deg., and scarcely ever up to 60 deg.; then the bees can scarcely get in their hives, although I have given them a lot of surplus room. When I look round and see them so, I fancy what will it be if we can really get a change of weather, and the thermometer up to 80 deg. or over; they will need all the ventilating that can possibly be done. When the sun does make his appearance there is such a commotion with bees and drones one has to go right up among them to make sure that they are not swarming. I do not know why there seems to be a lot of objection to the "Wells" system on the part of some bee-keepers. I have half-a-dozen double-queen stocks that have immense numbers of bees, as they are tiered up and quite full of bees. Perhaps if it came very hot they might tease me a bit by swarming, &c.; but I do not suppose I shall be able to keep any separate account of their doings, as I have not time. I was rather surprised myself to see that our friend W. H. Woods did not put his swarm back to complete his sections. I wondered how he was going to get them filled after the queen and bees were gone, as the young bees hatched out of their cells, the honey would be likely to be deposited there instead of in sections.—JOHN WALTON.

Whitby Heath, Chester, June 5.—Bees in this locality are not progressing so satisfactorily as could be wished. Severe night frosts have played havoc with vegetation, and the wet that has succeeded confines the bees to their hives. I have had a case of "queen deposing" this spring, not to be accounted for by over-manipulation. The successor raised by the bees was an unusully long time in starting oviposition; so long, indeed, that I had made preparations to supersede her, but just in "nick of time" I discovered that that step was unnecessary.—A. D.

Beemount, Stoke Prior, June 9.—Weather still keeps very unfavourable for the secretion of honey. Had it not been for the remarkably fine weather here at Easter, I feel sure I should have lost several of my stocks from starvation, providing I had not fed. When overhauling five of my stocks this week, I failed to find a particle of food. On the 6th I saw a dead queen being hauled out of a weak hive, and upon examining the hive I could discover neither queen, eggs, nor brood, but saw several open queen-cells. Perhaps this stock has requeened itself. I, however, inserted a comb of eggs and brood. This comb I was able to take from my artificial swarm of May 1. Notwithstanding I only used two inch starters, there were yesterday eight full combs of bees in all stages, but scarcely any food stored, although I have given this swarm a pound jar of syrup daily since May 1. I had serious thoughts of ordering about 4 cwt. of sugar and begin feeding rapidly for stores for winter, seeing the empty state of the hives; but have now decided to wait a little longer, and hope for better times.—PERCY LEIGH.

WEATHER REPORT FOR MAY, 1894.

WESTBOURNE, Sussex, May, 1894.

Rainfall, 1·01 in.
Heaviest fall, ·23 in. on 12th.
Rain fell on 11 days.
Below average, 1·18. in.
Max. Temperature, 69° on 17th.
Min. Temperature, 29° on 30th.
Minimum on Grass, 24° on 22nd.
Frosty Nights, 3.
Sunshine, 223·3 hours.
Brightest Day, 30th, 14·15 hours.
Sunless Days, 1.
Below average, 15 hrs.
Mn. Maximum, 55·4°.
Mn. Minimum, 44·2°.
Mean Temperature, 49·8°.
Maximum Barometer, 30·41° on 1st.
Minimum Barometer, 29·38° on 7th.

L. B. BIRKETT.

METEOROLOGICAL SUMMARY.

May, 1894.

Locality: Stoke Prior, Worcestershire.
Height above sea level: 225 ft.
Rainfall, 2·49 in.; heaviest fall, 0·48 in. on 11th.
Rain fell on 16 days.
Max. shade temp., 64° on 25th.
Min. temp, 27° on 27th.
Min. on grass, 20° on 27th.
Max. shade temp. at 9 a.m., 56° on 6th.
Min. temp. at 9 a.m., 40° on 26th.
Frosty nights, 5.
Max. barometer, 30·15° on 24th.
Min. barometer, 29·4° on 28th and 29th.

A very poor month here for bees, far worse than April. Wet, cold, and windy. Frequent hail and thunder storms. Strong N.E. winds. Dutch clover, peas, and beans in blossom. Severe frosts of 20th and 27th greatly damaged potatoes, beans, and strawberries. Hives far lighter at close of month than at the beginning. Drones thrown out wholesale. Very few swarms.—PERCY LEIGH.

Bee Shows to Come.

June 13 and 14.—Essex B.K.A. at Colchester. Entries closed. Post entries at double fees. Fifteen open classes. Hon. secretary, F. H. Meggy, Chelmsford.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries closed. Secretary, John Huckle, B.B.K.A., King's Langley.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees,

hives, honey, and appliances. Liberal prizes. Entries close June 29. S. Upton, secretary, St. Benedict's-square, Lincoln.

July 26.—Notts B.K.A. Annual County Show at Southwell. Liberal prizes. Open classes for appliances, hives, and extracted honey. Entries close June 19. Secretary, A. G. Pugh, Mona-street, Beeston, Notts Other shows connected with the Notts B.K.A. will be held as follows :—Lowdham, July 19 ; Hucknall Torkard, July 24 ; Beeston, August 6 ; and Moorgreen, September 4.

July 27.—North Norfolk Bee-keepers' Association. Great show of honey at Melton Constable Park. Liberal prizes. Entries close July 18. Schedules from C. J. Cooke, Edgefield, Melton Constable.

August 1, 2, and 3 —At Beverley, Yorks. Prizes for bees, honey, and appliances. Entries close June 23. Marshall Stephenson, secretary, York.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column

INQUIRER.—1. Bees reached us almost as wet as the first lot, the bodies being nearly black with moisture which has no doubt been caused as before. It is impossible to judge of the "race" to which the bees may belong, as the markings have about disappeared. We fancy, however, there is a trace of the ligurian element visible. 2. The adverse weather has no doubt delayed fertilisation of the young queens. Had our correspondent sent name and address, as per rule, we should have returned bees for his inspection.

B. H. (Launceston).—*Ants and Earwigs about Hives.* — Powdered naphthaline sprinkled among quilts assists greatly in keeping ants away. Earwigs only harbour about hives chiefly for shade and dryness, and, except for being somewhat uncleanly, do no harm to the bees. Carbolic acid smeared about their nesting places usually drives them away. We usually sweep the whole family when found into a vessel of water and drown them.

J. EDWARDS (Devon).—1. Brood in cells is all dried up, but we find a trace of foul brood sufficient to warrant us in saying the stock was diseased. 2. We think the common name for sulphate of potash is alum, but any chemist would tell you.

CUTHBERT BEDE (Durham).—Much obliged for your pointing out our having inadvertently quoted Poe's "Raven" instead of Sterne's "Starling." We wrote, perforce, hastily while one of our printers' (unnameable) messengers waited for "copy," and ourselves discovered the "slip" when just too late to correct it.

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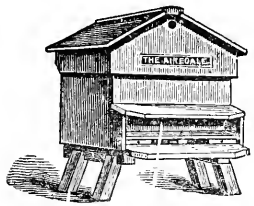

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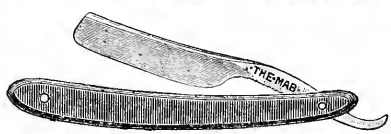

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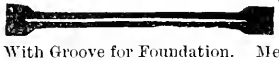

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FOUL BROOD.

HOW THEY DEAL WITH IT IN CANADA.

The reference made by Mr. William Woodley, on p. 203 of our issue for May 24, to the method of treating foul-broody stocks adopted by Mr. W. McEvoy, Foul Brood Inspector for the province of Ontario, Canada, has resulted in inquiries as to our opinion of the "McEvoy plan," as it has been termed. In reply to these inquiries—and, pending further investigation, we may say there is so much in the plan of treatment followed which on the face of it is opposed to all scientific teaching, that further experience and testing will be needed before sufficiently reliable results are obtained to enable us to form an opinion likely to possess much value. In view of what is known regarding diseases caused by the ravages of the multifarious forms of bacilli, and the investigations being made by the most eminent bacteriologists of the day on the subject, we should be slow to jump at conclusions so directly opposed to the teaching of science as some details of the special form of treatment under consideration appear to be. In this connection we are glad to learn that the method advocated by Mr. McEvoy has been dealt with from the scientific standpoint in a little work, recently published in America, with which we hope soon to be made acquainted, and we shall probably have something further to say after it reaches us.

But, apart from this, the plan of dealing with foul brood referred to, so far as its main principle goes, is not novel, and certainly cannot be called new, though the method of carrying it out is in some respects decidedly original. The main idea is that the disease is transmitted alone and entirely through the honey in the affected hive, and that, notwithstanding all theories and scientific teaching to the contrary, a diseased stock of bees will become perfectly healthy if removed from the foul-broody combs, and so dealt with as to ensure that every particle of the infected honey carried off by the bees in removal is consumed in comb-building before any of the wax formed from it is used in forming the new combs with which the infected hive is to be refurnished.

Why this has been called the "new McEvoy method" is not easy to say, because Mr. D. A. Jones, another well-known Canadian bee-keeper, practised it several years ago, and, to go still further back, we find that in June, 1877—seventeen years ago—when dealing with the same subject, the then Editor of this journal, after advising removal of queen to stop brood production, and giving a healthy queen cell wherewith to raise a successor, concludes his observations as follows:—"As soon as this has been effected, the whole of the combs should be removed from the hive and treated as before suggested (*i.e.*, burnt), and the bees left as a naked swarm for twenty-four hours; after which they should be shaken into another hive and allowed to remain there for a like period, until the honey brought with them in their honey-bags has been consumed, when they may be furnished—in a third hive—with clean, wholesome combs on which to start afresh." The plan of removing bees from diseased combs and compelling them to build new ones was also advocated in Germany more than half a century ago.

All this has, however, little to do with the efficacy or otherwise of the method, except for the purpose of—as Mr. Woodley puts it—"giving honour where it is due." And our object in referring to it here, is to say that the present is the most favourable month in the whole year in which to give it a trial on exactly the lines recommended by Mr. McEvoy. The points to be borne in mind, then, are, as we understand it, to reduce the diseased colony to the condition of a swarm by shaking the bees from the combs back into the hive, and substituting for the removed combs (which are burnt) frames fitted with starters only of foundation. The bees are left thus for four days, when the frames are again removed, the partly-built combs cut out and melted down for wax. Full sheets of foundation are then substituted, and the colony, is by this simple process, supposed to be completely cured.

The curious and really original part of this method is that it gives the considerable advantage of doing away with the

need for changing of hives, and all the trouble and expense connected with either disinfecting or providing new ones. Nor is any precaution necessary further than operating only on fairly strong stocks, and doing the work in the evening.

All this is at variance with preconceived notions as to the highly-infectious character of the disease, and the means by which it may be transmitted from hive to hive; and, as we have already said, our object in now referring to it is, first, in reply to inquiries, and, second, because the present is the most favourable time for giving it a trial. We, therefore, leave the matter in the hands of such of our readers as are specially interested, only adding the recommendation to use preventives in all hives and at all times in districts where the disease is rife; and, wherever feeding is needed to assist the bees in the formation of new combs, to medicate the syrup given while the process of comb-building is going on. We have always advised the prompt removal and destruction of all combs containing diseased brood, and if the tedious, troublesome, and costly work of renewing or even of disinfecting hives can be dispensed with by any such simple process as the one described, it will be a matter for all-round congratulation and thankfulness. Nor do we think that bee-keepers will be lacking in gratitude to Mr. McEvoy or any one else who renders help in bringing about so desirable a result.

BRITISH BEE-KEEPERS' ASSOCIATION.

"Royal" Show at Cambridge.

Communications to the secretary, posted from now till Thursday next, June 28, should be addressed to c/o Mrs. Ellis, Eaton Hurst, Carlyle-road, Chesterton-road, Cambridge.

The committee will be glad to be favoured with small consignments of flowers for the embellishment of the Bee Department at the Royal Show. Parcels may be consigned by Parcels Post, or by rail (in the case of short distances) addressed to the Secretary, Bee Department, Agricultural Show Ground, Cambridge. The committee will be glad to refund the outlay incurred in posting such parcels.

ANTWERP UNIVERSAL EXHIBITION.

In connection with the Antwerp Exhibition there will be a temporary bee and honey show, which is to be held from September 2 to September 9 next. Medals and money prizes are offered for the different races of bees, hives, appliances, honey, wax, and products and various things of interest in connection with bee-keeping.

There are in all seventy classes, and there will be no entrance-fees to pay, but application for space and schedules must be made to the secretary, M. V. Van den Broeck, Château de Tyberchamps, Seneffe, Belgium, before July 15, on proper forms. The Belgian Government has appointed a special jury of experts from different countries, our Mr. T. W. Cowan being selected as one of them, to adjudicate and award the prizes.

We have had twenty-five schedules sent to us, and we shall be pleased to send them to intending exhibitors on receipt of addressed and stamped wrapper forwarded to our office, 17, King William-street, Strand, London, W.C.

ESSEX BEE-KEEPERS' ASSOCIATION.

Colchester Exhibition.

The annual show of the Essex Bee-keepers' Association, in connection with the Essex Agricultural Society, was held at Colchester on Wednesday and Thursday, June 13 and 14, at Lexden Park, the residence of Captain Naylor Leyland, M.P. The schedule of prizes was on as liberal a scale as usual, and all the classes, excepting those for cottagers, were open to the United Kingdom. In spite of the unfavourable weather during the last few weeks, the show of honey was very creditable. The sections, as a matter of course, were not so good as they would have been had the bees been able to fill and seal them over quickly; but most of the extracted honey was quite up to the usual standard of excellence. Mr. Meadows, of Syston, made a good display of appliances, in addition to the articles specified in the schedule. Messrs. Dines & Sons, of Maldon, ran Mr. Meadows close for first honours in this class. In the class for new inventions, an uncapping machine was exhibited by Mr. H. Rowell, of Winckfield, Hants, which gave such evidences of the knowledge and ingenuity displayed by the exhibitor that the judges had no hesitation in awarding it the special prize offered by the association. The Bee Tent was well attended on both days to witness the manipulations of Mr. W. Debnam, the expert, and to listen to the discourses on bee-keeping by Mr. Durrant, Mr. Meggy (hon. sec.), and other gentlemen, who kindly undertook the task. The judges were the Rev. J. L. Seager and Mr. W. J. Sheppard, who made the following awards:—

Collection of Hives and Appliances.—1st, W. P. Meadows, Syston; 2nd, Dines & Son, Maldon.

Useful Inventions. — Special Prize, H. Rowell, Winchfield, for uncapping machine.

Twenty-five 1-lb. Sections.—1st, T. Colyer, Good Easter; 2nd, A. Mayell, Bradwell.

Twenty-five 1-*lb. Jars of Extracted Honey.*—1st, T. Colyer ; 2nd, A. Mayell.

Collection of Comb and Extracted Honey, 12 *to* 20 *lb.* — 1st, F. H. Brenes, Brentwood ; 2nd, J. C. Chillingworth, Bradwell-on-Sea.

Three Frames of 1894 *Comb Honey for Extracting.*—1st and 3rd, not awarded ; 2nd F. H. Brenes.

Twelve 1-*lb. Sections of* 1894. — 1st, T. Colyer ; 2nd, A. M. Collins, Tillingham.

Six 1-*lb. Sections of* 1894.—1st, F. J. Carter, Salleywood ; 2nd, F. A. Stratford, Hornchurch ; 3rd, A. Mayell.

Single Section of 1894.—1st, A. Mayell ; 2nd, W. W. Collins ; 3rd, F. J. Carter.

Twelve 1-*lb. Jars* 1894 *Extracted Honey.*—1st, F. H. Brenes ; 2nd, W. Loveday, Romford ; 3rd, F. J. Carter.

Six 1-*lb. Jars* 1894 *Extracted Honey.*—1st, W. Loveday ; 2nd, W. W. Collins ; 3rd, C. M. Collins, Tillingham.

Six 1-*lb. Jars Granulated Honey.*—1st, T. Colyer ; 2nd, J. C. Chillingworth ; 3rd. T. Jackson, Tillingham.

One 1-*lb. Jar Extracted Honey* (*exhibits to be the property of the E.B.K.A.*).—1st, F. A. Stratford, Hornchurch ; 2nd, W. Loveday ; 3rd, A. Mayell.

Bees'-Wax.—1st, J. C. Chillingworth ; 2nd, F. J. Carter ; 3rd, T. Colyer.

Cottagers' Classes.

Best Collection of Comb and Run Honey, 12 *to* 20 *lb.*—1st, W. Loveday ; 2nd, H. Hale, Broomfield ; 3rd, C. M. Collins.

Single Section of 1894.—1st, A. Mayell ; 2nd, H. Hale ; 3rd, W. W. Collins.

Six 1-*lb. Sections of* 1894.—1st, A. Mayell ; 2nd, W. W. Collins ; 3rd, A. Rayner, Kelvedon.

Six 1-*lb. Jars of Extracted Honey.*—1st, W. Loveday ; 2nd, A. Mayell ; 3rd, C. M. Collins.

Bees'-Wax.—1st, A. Mayell ; 2nd, C. M. Collins.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[1887.] To-day we reach the longest day, and on Sunday next Midsummer Day so-called ; but I trust it will not be midsummer; if it is, our summer in 1894 will be a very short one, for the summer days hitherto can be counted on one's fingers. The first warm day we had was Friday, the 13th. Thursday was a fair bee day, but rough winds made it hard work for the little labourers. Friday was a grand bee day, and Saturday, 16th, opened fine and hot, and I had ten swarms within an hour, seven of which went together. Fancy handling such a mass of bees without veil, and with sleeves rolled and in front of some fifteen hives busy at work ! Yet I got no sting except two or three slight punctures in the hands when putting the bees into the different straw skeps by the double-handful at a time. I have had to ask the indulgence of my customers waiting for swarms on account of the inclement weather of May and June, but a few such days as Saturday last and all will be served.

Fixing foundation in sections appears to be done by various methods. We began with Abbott's original fixer, and although I have seen nearly all those that have been brought out since, we have made no change ; we still use it and still like it ; a cup of clean water and the fixer is all that is required in warm weather to fix foundation, even full sheets for sections, so firmly that not one in a thousand is pulled off by the weight of the bees. Then, as to sagging, why, I was surprised to see that there was a right and a wrong way in which it should hang, to prevent it sagging. Now, Messrs. Editors, it is really too bad to have kept this secret in your pigeon-hole all these years, and not told us before ; I will admit that when combs are empty (combs in sections, I refer to), the way the foundation is put in makes a difference noticeable ; but when full of honey sealed to the outside, well, only the man with a mathematical eye would detect the difference in the majority of honeys. There is honey of a kind that the bees seal with projecting caps. I mean the caps stand out distinctly, similar to the capping of brood in a new comb. Now a dozen sections of this honey capped all alike, with the rows of cells running in straight rows, look very pretty, and I staged one dozen such at a show at Windsor, I think in '84 or '85, and I remember the remark of some one when I put them on the table, "that they were as much alike as peas in a pod." Of course, I was awarded first prize for them, or possibly it may have been for the honey in the combs, as at that time judges tasted the exhibits. Yet, notwithstanding the acknowledged beauty of uniformity in appearance, we own to the fact that we have never troubled which way our foundation for sections has been cut, so long as the pieces were of the size required, and we have turned out a fair number of finished sections during the last decade. In the matter of stock foundation, this is a question for our manufacturers to take up. Years ago, when I used full sheets of six to the pound, I have had some stretch about 1 in. or 1½ in. from top bar and some out of same parcel that did not stretch, so I began to look into my method of

working for the cause, and what do you think it was? Why, over-heating. I put in full sheets, and then put a large swarm of bees gorged with honey into the hive and laid on the wraps, so that the bees should be able, as I thought, to manipulate the wax into cells and not build on the foundation. Very nice in theory. Now let old practice speak:—1. I blamed the foundation-maker, thought it must be well mixed? Yet on finding combs in some hives stretched and in others not, I had to look for the cause, and I found that putting on too many wraps was the cause, and now, although I use foundation of seven sheets to the pound, I get no stretching. When I hive swarms in hot weather I should use only one thickness of hemp carpet; if cool weather, only two thicknesses, until the combs are built. I have also discarded the trouble and bother of wiring either the frames or the foundation; as I have before stated, I use only wide-shouldered frames. I fix with the wedge in the groove, and the foundation Mr. Howard has made for me is full length for the frame. I cut off about $\frac{1}{8}$ of an inch, so that it hangs just clear of the sides of the frames, and this shred of wax I fix in little pads on each side of each end of the sheet of foundation, near the bottom of the sides of frame. These little lumps of wax keep the sheet of foundation in position until fixed or built out by the bees to the frame. This method answers my requirements year after year. There are devices to hold the sheet of foundation in its place. One manufacturer has by this day's post sent me a sample of his broad-shouldered frames; they are different from "Abbott's" in that the distance-keepers are on both sides as the metal ends, and in the frame under notice the foundation is inserted into a groove in the centre of the top bar, which is cut nearly through, thus allowing the groove to open to receive the edge of the sheet of foundation. Then the two sides are also grooved and toothed; these are pressed or driven into the notches on each side of the top bar, holding the foundation in the centre of the frame; the bottom bar is also toothed, so that, with a little glue, no nails are required in making the frame. The top bar is 17 in. long, but has no distance-keepers for the sides of hive. It is interchangeable, with metal ends, and, as the top bar is cut in one piece, there is no chance of the shoulders coming off. The method of fixing the foundations is simple and effective. I have just put in a full sheet, and there does not seem the slightest chance of the foundation pulling out of the groove; in fact, a 2-in. square piece tore apart rather than come out of the groove when fixed (a patent in this frame is, I believe, applied for). Our American bee brethren are using galvanised iron cylinders for their honey, and find no ill effects. It appears the bee men of California were the first to use these galvanised tanks. No doubt our scientists will be surprised to know that honey does not deteriorate in quality in these iron storing vessels. The advantages of galvanised iron over tin are extra strength and less liability to rust.—W. WOODLEY, *Beedon, near Newbury.*

"WELLS" HIVES.

DO THEY CONTAIN ONE OR TWO COLONIES?

[1888.] I hope my too frequent letters will not become tiresome to you or to your readers, but when I continue to see criticism in the B.J. more or less adverse to the double-queen plan from bee-keepers who have either not tried the plan at all, or have made an unfair or imperfect trial of it, some little indulgence may be fairly claimed in order to put my critics straight. I refer now to the letter of Mr. Arthur J. H. Wood (1875, p. 225, B. J., June 7), and, while pleased to hear that he is still keeping bees successfully, I would ask, Does he think it would be fair or right for him to either condemn or "recommend to his friends" a system which he has never tried, and of which he has no practical knowledge whatever? And if he admits the unfairness, why refer to it at all? It is clear he must be very favourably located for honey-getting, but to declare that the results from his worst two stocks beat my average is, to my mind, no comparison at all, and tells neither against nor for the two-queen system. Because he does so well with single-queen stocks is no argument that he would not succeed still better with double-queened ones! Comparison, to be worth anything, must be arrived at by working both plans side by side, with equal attention and care. Mr. Wood and others will also persist in calling each of my hives *two stocks*, while I (and I am very pleased to have the concurrence of well-known and able authorities in this view) maintain that they should be counted as one. Just let me try once more to show that this is the right view. Suppose Mr. Wood and I have each a hive of equal strength, the bees covering eight frames well in September next. Well, he keeps his bees on the eight frames and winters them so. While I—working on my system of preserving my surplus queens, instead of allowing them to be killed by the bees—slip in a perforated dummy in the centre of the hive, dividing the combs into two compartments of four frames in each. Thus far I hardly think even Mr. Wood will insist that I have united two stocks to make one "Wells" hive. We now go a little further, and I add a young queen—preserved as already stated—to the queenless compartment of the hive. Does the addition of this *single bee* make it into two stocks? I say emphatically, it does not. But I go further, and put it in another way—I say most wise bee-men rear young queens every year to replace old ones in autumn. And in this re-queening business many queens are sacrificed to make way for successors not so good as

those killed. Well, by my plan I am not "off with the old love before I am on with the new," for I assure myself of a young queen every year, and keep the old one alive for another season, often to my manifest advantage, in that I keep up a supply of young queens while getting all the good out of the older ones, instead of killing them.

It may be said that I add, not a "single bee," but a nucleus colony to my hives in autumn; granted, but I only form the nucleus to preserve the queen, and I am placed at no disadvantage so long as the extra "single queen-bee" is there, seeing that my stocks are usually so strong at the "uniting" time that I have bees enough and to spare in each hive.

Take another illustration. Suppose a cottager has four skeps, each containing a second swarm of this year of equal strength, and none of which has bees or food enough to stand the winter. Let us further suppose that Mr. Wood and myself each buy two of these skeps, and go our respective ways, each to deal with the bees according to his own fashion. Mr. W. joins his two lots on six frames, allowing the queens to fight it out in the orthodox way, one being killed, of course. On the contrary, I drive my bees, but before hiving I divide the six frames by my perforated dummy, on each side of which I put one lot of the driven bees, and allow no fighting or killing of queens. We work our hives the following season each according to his own plan, and if I chance to get double the quantity of honey to that obtained by Mr. Wood, can he fairly retort that my result is from two stocks while his was only from one? If he can, I have no more to say. If he cannot, I think we should hear no more of a "Wells" hive being counted as two stocks of bees.—Apologising for the length of this letter, GEORGE WELLS, *Aylesford, Kent, June* 13.

REQUEENING

AND BUYING QUEENS.

[1889.] As one often sees both advice and warning in your journals on the above subject, it occurs to me that my bitter experience may induce some people to "let well alone," as I intend to in the future; at any rate as regards buying queens.

Last autumn I desired to requeen two hives; I therefore bought a queen, for which I gave 8s. 6d.; and having removed the old queen from No. 1, I introduced the young one by Simmins' direct method, and was perfectly successful in the operation.

Thinking 8s. 6d. rather a high price to pay, I decided to buy a cheaper one for No. 2, and accordingly bought a queen for 2s. 6d. from another well-known dealer. On receiving this, even I, a comparative novice, could see that she was old, and no better than the one I had removed; but to make certain I showed her to an expert at a show. He asked me where I got her, and on hearing the name he said "she was sure to be all right from such a source," but did not examine her. I, however, decided not to adopt his advice, and bought another from the first dealer, giving 7s. 6d. for this one, and introduced her safely. A few days after that an expert visited me, and I showed him the queen I considered old, without saying where I had obtained her. He examined her carefully, and said that she was "not less than three years old."

In order to be doubly sure, I sent that queen to you, sir (dead), and you kindly replied in the JOURNAL, "Queen sent is evidently an old one." I had requeened No. 2 on August 4. On August 22 I again found them queenless, possibly from being handled too soon after requeening. I therefore wrote to a third dealer for another young queen, for which I paid 3s. 6d., the receipt describing it as "one 1893 fertile queen." She was safely introduced, and the hive fed and packed up for winter. On April 10 last I made my spring examination. No. 1 was all right, but in No. 2 I found no worker-brood whatever, but a large quantity of drones and drone-brood. I concluded that the hive was queenless (as I could not find her), and had a fertile worker. I therefore gave them a comb of eggs and brood from my strongest hive (which latter "balled" its queen in consequence), but they raised no queen cells. Then we had a long spell of bad weather, and I was unable to do anything for them, and the drones increased in numbers while the workers diminished. At last, on May 25, I examined them *thoroughly;* there were hundreds of drones, a score or so of workers, and *a queen.*

Of course, the stock was useless, so I removed the queen, and sent her to the chief expert of my association (with whom I had already had some correspondence on the subject), and he replied that the queen was "an old drone-breeder," and being rather small, I had failed to find her. The hive that had "balled" their queen had raised another, which is now laying, I am glad to say. I do not think that it is quite honest of dealers to advertise young queens at 2s. 6d. and 3s. 6d. if they intend supplying old ones to people whom they think are novices.—P. S., *Newark. June* 12.

EARLY HONEY IN YORKS.

THE DOUBLE-QUEEN SYSTEM.

[1890.] On looking over my hives to-day, June 9, I took off a few more sections, but the weather has been very bad this last week for the bees. Your correspondent, "Hawk Eye" (1878, p. 226), seems rather incredulous as to me trying the double-queen system. My hive was made in 1890, when I wrote about it in your columns. The system did well for me that year with the early honey, but living two miles from my bees, I lost them the following spring through being away and no one to look after them. If "Hawk Eye" had given his name and address instead of

using a *nom de plume*, I should have known to whom I was replying, and if he has any personal knowledge of me, or is a resident of Tadcaster, he could have asked me himself about it. I rather think he hails from about Knaresborough, and if he is feeding bees, I can only say there are a lot about here who are not, and have no need to. There may be a few instances where feeding is needed, but mine are not among them. Nor have I performed any special operation to make my bees "weather proof." I am in a good locality for early honey gathering if the weather is favourable, and if "Hawk Eye" could have a peep at a bell glass now three parts finished on a hive, it might surprise him, as it has many who have been to see it lately. I am glad Mr. Wood is still to the front.—THOS. ROTHERY, *Stutton, near Tadcaster, Yorks. June* 14.

BEES IN LINCS. AND CAMBS.

[1891.] June 1st opened splendidly, and, doubtless, many besides myself hoped it was the commencement of real bee weather. We have, however, been disappointed, and instead of being busy piling on supers, and doing other work that a good honey-flow in fine weather necessitates, we are, as far as our apiaries are concerned, comparatively idle. I feel I must now find time to jot a few lines to the paper I look out for so anxiously every week.

The untoward weather has seriously affected stocks and swarms, except where they have been liberally fed. In view of the nearness to us of the "Royal" show, I have been hiving instead of selling swarms; and while not expecting much for a display at Cambridge, I am looking forward to a busy time in July and August, when about 50 acres of honey-producing plants will be in bloom close by.

The weather of May has been very much against us, who, being in the midst of an extensive acreage of orchards, naturally look for full supers ere June 1; but this is of little importance compared with the anxiety caused by the spread of foul-brood in Cambs. Last spring when lecturing in a village in that county, I found a case, and warned my neighbours to give the district a wide berth. In the autumn a neighbour of my own, who had some stocks standing in the district to which I refer, reported the discovery in another part of the same village of stocks rotten with the disease; and a very sickening sight it was for me to find, when I went over, the foul-smelling combs thrown into a hole in front of the other stocks and only half buried!

A well-known expert told me some time since that he inspected an apiary containing several bad cases, and now I find that some equally bad cases have existed in other districts of the same county. A few weeks ago I was very nearly the innocent cause of giving the disease a lodgment at St. Ives. When passing through a railway station in company with the same expert I took up a stock and left it for a friend at St. Ives. I made no examination of it, but I was informed by letter the next day that it was affected with foul-brood. I sent a messenger by the next train advising destruction of the stock, and my recommendation was at once carried out. It is time that Associations or other bodies were empowered to direct an inspection of apiaries in or near infected areas, and take steps to stop the spread of the disease for the general good. Stocks have, to my certain knowledge, been sent out of infected areas, and while this goes on the disease must spread.

You have stated that you can name infected areas by the queries you receive. Has not the time arrived when undoubtedly infected areas should be known to bee-keepers through your columns, or by some other means?

I take it to be a positive duty to warn members of the craft who are introducing new blood into their apiaries to shun, as they would a leper, those districts known to be infected.—C. N. WHITE, *Somersham, Hunts.*

Queries and Replies.

[1074.] *Making Artificial Swarms.* — 1. Adverting to your reply to 1071 (p. 237), I wish for some new queens and an increase of stocks about the middle of next month. I propose moving the old hives from their stand and putting new ones in their places to receive the old flying bees; then to find queens and put each with five or six frames in new hives, and leaving bees in old hives to raise new queens. 2. As to the "Wells" hives, I thought of putting an ordinary hive in place of the old one, and then transferring both old queens into it with sufficient frames. Bees in the Wells, I suppose, will raise a queen on each side of divider, will they not? 3. It was with a wish to save my bees the trouble of travelling to the heather (some two and a half miles there and back), as they did last year after the clover harvest, that I proposed sending the old bees there—not to fill supers but brood frames. As I am only a novice, I should be glad of your further advice.—N. N., *Norwich, June* 14.

REPLY.—1. If the usual precautions are observed in making the artificial swarms, and drones are flying at the time, there is no reason why the plan proposed should not succeed. But the method described in "Guide Book" is more reliable. 2. As before stated, "Wells," or double-queened hives, are unsuitable for making artificial swarms from for several reasons. Your plan of dealing with the one referred to *may* succeed, but we cannot say that queens will be raised in both compartments of hive. If tried we shall be glad to hear result. 3. It should not be forgotten that bees are sometimes unable to gather anything at the heather, and if sent there foodless might starve for want.

[1075.] *About "Chilled Brood."*—1. Is there any way to tell whether capped brood is chilled? 2. What ought to be done with frames containing chilled brood? 3. Does chilled brood ever hatch out after a delay? If so, what is longest period possible? 4. Will bees clear out cells of capped chilled brood? 5. Do queenless hives ever start queen cells, when no eggs or larvæ are present? 6. What is lowest temperature, and for how long will capped brood endure successfully this low temperature? 7. Would bees store honey in August here (Norfolk)? The "Guide Book" says that bees do little from middle of June to middle of August. Is this generally true in Eastern Counties? 8. What is honey got from in August, and after?—NOVICE, *Norfolk.*

REPLY.—1. If unsealed, the larvæ turns black in colour; if sealed, it fails to hatch out at the proper time. 2. Cut out the combs and burn them. 3. No; if chilled, the brood dies. 4. Yes, if not too great in quantity; but they should not be allowed to do so. 5. They sometimes just start cells, but go no further. 6. We do not know that the lowest temperature has been accurately determined, but for all practical purposes it is enough to say that when it goes below 60 the sealed brood takes harm, and if kept at so low a temperature as that, would die. Unsealed brood should not be long exposed to a temperature below 70 or 75, or mischief would follow. 7. All depends on the flora of the district. Bees do little honey-storing after July, except in districts where an abundance of heather grows.

[1076.] *Queens and Fertile Workers.*—A cast was hived on May 22, and fed daily. Twelve days later it was examined, but no queen eggs nor brood seen. A frame containing eggs and unsealed brood was inserted four days afterwards, with the idea that queens would be reared. Ten days after this hive was again opened, but no queen-cells were visible, and, strange to say, eggs, larvæ, and a little sealed brood were in the frame next to the one that had been inserted. The eggs, &c., were in worker cells. No queen could be seen. 1. Do you think the queen is in the hive, or is a fertile worker present? 2. If the latter, what peculiarities has she by which she may be easily detected and removed?—HENRY FORRESTER.

REPLY.—1. The queen is evidently all right, and will not be difficult to pick out when she becomes a little more "matronly" in appearance. 2. Fertile workers cannot be distinguished from the ordinary worker bee.

[1077.] *Managing Swarms.*—I have bought a stock of bees in a skep, and wish to divide the bees into two bar frame hives. 1. Could I let one swarm come off, and then put the skep above the top-bars of another frame-hive? 2. If I did this, would another swarm come off; and if so, how could I prevent it? Being a skep I cannot well cut out queen-cells. 3. If the second swarm comes off, when should I return the bees with safety without running the risk of them again coming off? 4. Where can I get instructions for making a fumigator? —"FUMIGATOR," *West Hartlepool.*

REPLY.—1. Yes. 2. If—in addition to setting the skep above a frame-hive after swarming—you move it to a new stand some distance away, and put the first swarm on the old stand, it is probable no second swarm will issue. 3. If, however, it should swarm a second time after the usual interval of eight or nine days, keep the swarm in the hiving skep till about six or seven a.m. on the following morning, and then return it. 4. The pamphlet, "How to make an Extractor and a Bellows Smoker," may be had from this office for 6½d. post free.

[1078.] *Bees "Balling" Queen in "Wells" Hive.*—When supering a "Wells" hive yesterday I had a look in at the brood-nest, and found the queen being "balled." I released her and dispersed the bees with smoke, but last evening, after dark, I found her on the alighting board dying. Will the bees raise another queen, and, if not, what had I better do? I am thinking that being a "Wells" hive the queen in the other compartment will satisfy the bees.—E. C. R. W., *Salisbury, June* 15.

REPLY.—Only an examination of the combs will decide the point.

[1079.] *Introducing Queens to Supered Stock.*—1. Is enclosed comb affected with foul-brood? it was taken from a weak stock yesterday. 2. Can you tell me the best way to introduce a valuable laying queen? 3. The stock is supered, and I propose to take out the combs with the bees, and shake them off in front of the hive, replace the combs, and let the queen run in with them. If this is right, how long before should the old queen have been deposed? 4. Will naphthol beta retain its virtue any length of time, if kept in an air-tight vessel? —D. R., *June* 13.

REPLY.—1. Comb is affected with foul-brood. 2. Personally, we should not hesitate to follow Simmins' plan of direct introduction, but in inexperienced hands it would be safer to cage the queen. 3. We should not risk running queen in at entrance as proposed; if supering arrangements prevent introduction at top, she should be caged for twenty-four hours after removal of old queen. 4. Yes.

Echoes from the Hives.

Winkfield, near Windsor, June 11.—Bees are all strong and in the supers, but doing nothing. I was obliged to feed the last week in May. They are now getting enough to keep them going. If the weather clears up and becomes warm, I think the honey would come in fast, bees are so ready for it. Clover is beginning to bloom but will be rather

scanty ; may be better later on. Limes show well, but bloom will not be out before July. There is time for a good harvest yet if the weather gets better soon, but our harvest here generally finishes about end of July.—GEO. HEAD.

Fairspeir, Ascott-Wychwood, Oxford, June 11.—Up to date very little or no honey has been gathered in this district. Clover, sainfoin, and beans scarcely in blossom yet. Swarms have done badly owing to the bad weather, and robbing has been prevalent. I fear that it will in any case be a poor yield of honey in this district, for our chief source —white clover—has in very many cases had to be ploughed up owing to last year's drought destroying the young plants. I had intended trying the "Wells" system, but having to buy suitable hives or to alter one's old ones, makes one pause a little. Added to which, I cannot help thinking that single stocks headed by young queens, and well provided with stores, will give almost as good returns as the double hives. Any way, I have had single stocks in a good season yield from 70 lb. to 130 lb. surplus each. We are, however, much indebted to Mr. Wells for giving us the benefit of his experience. I wintered several lots of driven bees on the "Wells" system, but although in every case I used perforated dividers of the proper thickness, yet every hole was propolised up, and the bees were not clustered next each other as they ought to have been. Some bees I look after for a friend swarmed on April 25. Two more hives also swarmed on May 5. But the swarms have done badly.—APIARIST.

S. Derbyshire, June 16. — Bees in this neighbourhood came through the winter in capital condition—the mild open weather in February and March enabled them to work on the spring flowers on most days. In April, abundant stores were gathered from damsons, plums, currants, and gooseberries, whilst drones were flying freely on the 21st, quite a month earlier than usual. Several swarms also came off at the end of April and early in May. Since the middle of May, however, the weather has been most unfavourable for bees. Although supers have been on about a month, they were not taken possession of until the last few days. Stocks which have been well looked after will now begin to store heavily, if weather is favourable, for the white clover and lime are our mainstay, and surplus is rarely secured before July comes in, the end of the latter month being generally the close of our season. Seldom do bees here take to the supers freely much earlier than the time when the elder is in flavour, and as only a few white patches are yet visible upon the bushes, our bee-keepers need not despair. White clover in the meadows looks splendid, whilst the heavy rains which have accompanied the thunderstorms have cleared the aphis off the limes, the young growth and flower-buds of which look most promising.—T. W. JONES.

Bee Shows to Come.

June 25 to 29.—Royal Agricultural Show at Cambridge. Entries closed. Secretary, John Huckle, B.B.K.A.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances. Liberal prizes. Entries close June 29. S. Upton, secretary, St. Benedict's-square, Lincoln.

July 26.—Notts B.K.A. Annual County Show at Southwell. Liberal prizes. Open classes for appliances, hives, and extracted honey. Entries close July 19. Secretary, A. G. Pugh, Mona-street, Beeston, Notts. Other shows connected with the Notts B.K.A. will be held as follows :—Lowdham, July 19 ; Hucknall Torkard, July 24 ; Beeston, August 6 ; and Moorgreen, September 4.

July 27.—North Norfolk Bee-keepers' Association. Great show of honey at Melton Constable Park. Liberal prizes. Entries close July 18. Schedules from C. J. Cooke, Edgefield, Melton Constable.

August 1, 2, and 3.—At Beverley, Yorks. Prizes for bees, honey, and appliances. Entries close June 23. Marshall Stephenson, secretary, York.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communication.

M. H. (Hants).—*Dealing with Foul Brood.*—The comb is affected with foul brood. You did quite right in removing (and, we hope, destroying) the combs and reducing the bees to the condition of a swarm. Use the remedies as directed, and hope for the best. The sections may be given in ten days or so, if weather keeps fine in the interim.

JAS. MCKEAN (Castleblaney).—Without a sample of the comb containing brood, we can give no opinion as to what is wrong with the hives or bees, and it is hardly worth trying remedies for what is complained of until you know something of the cause.

BEGINNER (Hants).—1. Excluder zinc should always be placed between hives and boxes of shallow-frames, but with sections it is a matter of opinion whether the zinc is advantageous or otherwise; some use it, others don't. 2. A little practice should enable you to shake the bees from the combs very easily, and, when properly done, the act of shaking subdues rather than irritates them. You should be shown the way to do it properly, if possible, by some one who knows how. 3. Bees are usually less manageable when little or no honey is coming in. A careful but firm method of handling will generally keep bees under control, and if the opportunity occurs it would be very helpful for you to watch how an expert goes about his work when manipulating a hive, say at some show.

E. J. B.—1. The bees found will probably have died from want owing to the very adverse weather since the swarms were hived. Give a little food at once. 2. A queen is not considered an "adult" till she has been fertilised and is laying.

H. S. L. (Ilford).—1. Lift the frames carefully without disturbing bees more than is needed. About the middle of day is best time. 2. Yes, if a break-down is suspected.

H. ROWELL.—An illustration of the "Hooker Uncapping Machine" certainly appears in ninth edition of the "Guide Book," and every edition issued since.

D. C. (Oswestry).—*Feeding Supered Hives.*—To feed supered hives is rightly considered a most improper proceeding, because what syrup given is stored in the cells, and in consequence the consumer gets sugar syrup instead of honey. By the time this appears in print it is more than probable that no feeding will be needed.

E. KIRK BROWN (Preston).—*The "Nameless" or "May" Disease among Bees.*—Through being enclosed in a close tin box the bees reached us soaking wet with condensed moisture, and nearly all dead. They afford no clue to cause of death, but from symptoms we judge the stock to be affected with what has been called the "Nameless Disease." In Germany it goes by the name of "May" disease from making its appearance usually in the month of May. Several remedies have been recommended, but none are known to be effectual, and if left alone the stocks affected—which are nearly always strong ones—will recover of themselves.

R. J. H. (Swaffham).—Bees may be called the ordinary or "common" kind, though there is a slight trace of the carinolan in them. Instructions for feeding will be found in "Guide Book" sent.

GENISTA (Manchester).—1. We should syringe the sections with either soluble phenyle or salicylic acid solution before using again. 2. The chemist who did not know phenyle, but had it as "creolene," should at least be certain that the two products are synonymous. We do not know "creolene," but soluble phenyle is advertised as being obtainable from all chemists, or from the makers, Morris, Little, & Sons, Doncaster, and we should not use the other as a substitute.

W. G. (South Cave).—1. Honey sent is not aphidian, as you suppose. Its flavour is that of honey often gathered in early spring from the various fruit blossoms. It is quite good for use. 2. Some bee-keepers prefer to use dummy boards having a bee-space below, but always take the precaution to prevent the bees entering the empty portion of the hive at such times as honey is being stored. Dummies of perforated zinc would not be at all suitable for many reasons.

JOHN TOPPS, JUN. (Bottesford.)—*Queen Cast Out.*—So far as we can judge from details given, and an examination of queen sent, the bees had made preparations for swarming prior to your inspection of combs on the 6th inst., but the subsequent cold weather delayed it, and in consequence of this delay the bees have for some reason deposed the queen, which, though we judge her to be over a year old, is a very fine one. An examination will probably show that she has been succeeded by a young queen.

H. SEAMARK. — *Royal Show.* — Exhibitors' passes in the bee department are sent out by Mr. J. Huckle, King's Langley.

H. M. (Taunton).—The matter is dealt with on first page of this issue.

J. CLARK (Maryport).—It is so contrary to nature for a common humble bee to fraternise in a skep with hive bees that we must be excused for being a little credulous on the point, unless actually seen by yourself, which is not made quite clear in your note.

IGNORAMUS (Pulborough).—Comb contains nothing worse than fresh gathered pollen.

H. (Norfolk).—The inference is that some mishap has happened to the queen, when hiving swarm in the frame-hive, unless an examination of parent skep shows that the swarm has not returned to it. In the latter case the bees must have decamped; but this is not at all likely. It is safer to throw swarms out in front of the hive they are to occupy, and allow the bees to run in than hiving them at the top as you have done.

W. P. T.—Comb is affected with foul-brood.

T. W. LEMIN.—We see no reason to suppose that foundation sent is not pure bees-wax.

Several letters, queries, &c., are in type, and will appear next week, as will report of Canterbury Show.

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NEW HIVES, standard size, takes eleven frames, with second story for extracting, stocked with strong MAY SWARMS of English Bees on eleven frames and foundation, wired in, packed and put on rail for 33s. each; or offers for several. Can be seen any time. RICHD. ILLMAN, Florist, Strood, Rochester. E 17

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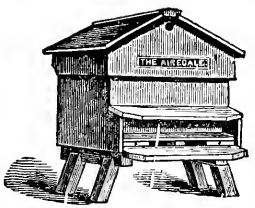

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Editorial, Notices, &c.

USEFUL HINTS.

WEATHER.—What a welcome change has taken place in the weather during the past ten days; and, it may be added, how doubly welcome would the change have been to large numbers of anxious bee-keepers had it "come" but ten days earlier still! We say this in view of what is regarded as the most important bee show of the year, viz., the "Royal" now being held at Cambridge. It is a long time since so large an entry has been received in the honey classes for the "Royal" as this year, and had the present bee-weather extended backward for even a week, the withdrawals would probably have been as few as they were, unfortunately, numerous. But, shows apart, the change will, no doubt, infuse new hope into the hearts of many lately-desponding bee-men, just as it renders more cheerful *our* task of periodically saying something about the weather and the bees. It seems, then, as if normal summer warmth had really come at last, and we may look for reports of supers filling to take the place of feeders emptying in the near future, if—and we do not omit that much-meaning little word—the present beautiful weather continues.

JULY SWARMS.—It is more than probable that the summer warmth, so long deferred, will result in the issue of a good number of swarms from supered stocks, and a corresponding disarrangement of plans for securing surplus before the honey season comes to an end. As a rule, we cannot have both honey and increase the same year, but when swarming is deferred till June has passed it becomes still more difficult. The point, therefore, is to deal with swarms and swarmed stocks with unfinished supers on them in such a way as to obtain the best results under present circumstances. With this end in view, all top swarms which issue should—as soon as settled—be set in the hiving skep on the stand of the parent stock, the latter being moved to another part of the apiary. In preparing a frame-hive for the reception of the swarm, contract the body-box or brood-chamber to about six frames and fit these with full sheets of foundation; next remove all surplus chambers containing unsealed combs from the swarmed hive to that intended for the swarm, replacing the whole with queen excluder above frames, as before. Set the hive on the old stand, wedge the front up an inch or more, and run the bees into it. Leave the front raised for a day or more if the weather be warm to keep the hive cool and prevent a break-down with the foundation through overheating. Care must also, of course, be taken to keep the bees from entering the part of the brood chamber not occupied with frames, either from below or (through the surplus chambers) from above.

Returning to the parent hive, it will be found that owing to the lateness of the season and its being depleted of all the flying bees will considerably reduce the chance of a second swarm coming off, but removal of all surplus cells on the seventh day after the first swarm issued will quite remove the risk. On the other hand, if surplus queens are desired the brood-combs of the old hive may be divided into two or more nuclei, and leaving a good queen-cell or two to each portion in the usual way. It must also be borne in mind that special care is required in order to succeed with nuclei.

If the above arrangement is carefully carried out it will, we think, yield the only chance of getting unfinished surplus work completed, seeing that we get to work on it almost the whole of the honey gatherers of the swarmed stock by securing all the flying bees in the swarm, and with only a limited brood chamber, and little or no brood to care for, they can devote themselves mainly to surplus storing during the short time the honey season lasts.

COMB-FOUNDATION.—We have received several letters again referring to the question of "how foundation should hang in frames," and if there was in them anything tending to throw further light on the subject we should not hesitate in giving readers the benefit. The matter has, however, as we think, been fairly dealt with in our issue of the 14th inst. and may now be allowed to rest, seeing that it is in some respects a manufacturer's question, and we have little fear but all will come right in the end.

BRITISH BEE-KEEPERS' ASSOCIATION.

Meeting of the committee held at 105, Jermyn-street, on Wednesday, 20th inst. Present: Henry Jonas (in the chair), Rev. G. W. Banks, W. B. Carr, Major Fair, W. H. Harris, J. H. New, E. D. Till, and H. F. Witherby. With Messrs. J. M. Hooker and A. H. Martin, ex officio, and J. Huckle, Secretary.

Letters were read from Mr. Garratt, the Hon. and Rev. H. Bligh, and the Rev. R. Carrington (who had previously attended a sub-committee meeting) regretting their inability to be present.

The statement of accounts for the month ending May 31 was submitted by the Finance Committee and approved. A letter was read from the Chicago Exhibition Commissioners intimating that an Award of Merit had been made to the British Bee-Keepers' Association in respect to their exhibit of honey.

It was resolved that the Third-class Examination, fixed to take place during the time of the Cambridge Exhibition, be held on Wednesday, June 27.

The following new members were elected, viz.:—

Mr. John Hurst, Broad Oak, Groombridge.
Mr. R. Ware, Frant, Tunbridge Wells.
Mr. T. W. Jones, Etwall, Derby.
Mr. G. E. Clarke, Leyton, Essex.
Mr. D. H. Durrant, Acton, Middlesex.
Mr. W. C. Smith, Walton Bridge, Canterbury.
Mr. G. T. Dunkley, Harpenden.

Other business of a routine character was transacted, and the committee adjourned to Thursday, July 12.

ROYAL COUNTIES AGRICULTURAL SOCIETY.

SHOW AT CANTERBURY.

This show was held at Canterbury on Tuesday, June 12, and three following days. The first two days were dull and showery, but the third and fourth proved warm and genial, consequently the attendance on the latter days amounted to upwards of 20,000 persons.

The bee department, which was organised by the British Bee-Keepers' Association, materially aided by the Kent Association, proved an important attraction, and a complete success. Although the quantity of honey displayed was by no means imposing, its arrangement created a pleasing effect, and elicited many expressions of admiration. The space provided by the society—60 ft. long by 15 ft. wide—was well filled with exhibits of the usual description. Messrs, Green & Sons, C. Overton, and H. S. Hutchings, competed in the "Collection of Appliances" class; whilst in that for hives Messrs. Redshaw, Lanaway & Son, and those above mentioned, filled eleven entries, all of which were excellent specimens of material and workmanship. The first-prize hive, shown in the class for cottagers' hives, was a marvel of cheapness at 10s. 6d. The trophy of honey exhibited by Mr. E. Longhurst, containing nearly 300 lb., was strikingly effective, and reflected highly his public spirit in giving, at much cost and trouble, such valuable help to the occasion. Considerable interest was manifested in Mr. Hole's device for catching a swarm, the process of which was explained to the visitors. The task of judging was undertaken by the Rev. R. Errington, and Messrs. W. B. Carr and John M. Hooker; the office of stewards of departments being borne by Mr. J. Garratt and Mr. E. D. Till. Mr. Roland Green lectured in the bee tent; and Mr. G. J. Wright, the energetic local secretary for the Thanet district, gave very valuable assistance throughout the show in a variety of ways. With a view to bring British honey into prominence, it was arranged that small sample bottles of honey, bearing the new distinctive label of the Kent B.K.A., should be on sale at a charge of threepence each, and it is satisfactory to state that a considerable quantity was disposed of. Evidence abounded that bee-keeping is regarded with no small degree of favour in East Kent, its practical outcome being that a large number of orders were placed with the manufacturers of appliances, and an important addition made to the roll of members of the Kent Association.

List of awards:—*Collection of Hives and Appliances.*—1st, H. S. Hutchings, St. Mary Cray, Kent; 2nd, Green & Sons, Rainham; commended, C. T. Overton, Crawley, Sussex. *Observatory Hives and Bees.*—1st, Green & Sons; 2nd, C. T. Overton. *Best Frame Hive.*—1st, C. Redshaw, South Wigston; 2nd, Lanaway & Sons; commended, H. S. Hutchings. *Cottagers' Hives.*—1st, H. S. Hutchings; 2nd, C. Redshaw; commended, Green & Sons. *Section Racks.*—1st, H. S. Hutchings; 2nd, C. Redshaw; commended, C. T. Overton. *Twelve Sections.*—1st, W. Woodley; 2nd, H. L. Hertslet; 3rd, Rev. G. W. Bancks; commended, E. Longhurst. *Extracted Honey.*—1st, W. Woodley; 2nd, E. Longhurst; 3rd, Rev. G. W. Bancks; highly commended, G. T. Tomkin. *Three Shallow Frames of Comb Honey.*—1st, E. Longhurst; 2nd, G. Wells. *Collection of Honey.*—1st, E. Longhurst; 2nd, C. Overton. *Bees'-Wax.*—1st, E. Longhurst; 2nd, A. J. Carter; commended, H. S. Hutchings.

The judges accorded a special high commended to the "*Swarm Catcher*" exhibited by Mr. H. W. Brice, and to the "*Self Hiver*" by Mr. Hole, and for Mr. Durrant's fine collection of pressed *Bee Flowers.*

WILTS BEE-KEEPERS' ASSOCIATION.

SHOW AT DEVIZES.

At the annual meeting of the Wilts Agricultural Society on the 7th and 8th inst., the Wilts Bee-keepers' Association, as usual,

attended with the bee tents, and a capital collection of hives and appliances by various makers was exhibited by Mr. S. M. Filtness, of Old Swindon, also a great variety of sweets made from honey, for all of which there was a good demand. Demonstrations were given five times each day in the bee tent, which, the weather being fine, were fairly patronised. The takings, as usual, hardly covered expenses, but several new members were received and visits from the experts arranged.

In consequence of the unfavourable weather no honey was exhibited, though six weeks before there was a good promise of having a considerable quantity staged.

DEATH OF MR. JOHN D. McNALLY

We learn with much regret of the death of the above-named gentleman, which took place at his residence, Laurencetown, co. Down, on the 18thinst. Mr. McNally was a frequent contributor to our pages, chiefly in connection with bee and honey shows, and was known as a successful exhibitor thereat. Though not so prominent in the pursuit as his elder brother—our well-known and esteemed correspondent, Mr. Wm. McNally, of Glenluce—he was an enthusiastic bee-keeper, and, after leaving his native Scotland to engage in business in the North of Ireland, he stoutly advocated and upheld the excellence of Irish honey as being equal to any in the kingdom.

A few months ago Mr. McNally was—mainly, we believe, through overwork—stricken with a serious illness, which terminated in his death as stated. It seems only a short time—though over two years ago—since we announced his marriage and permanent settlement in business at Laurencetown, co. Down, and we now respectfully tender our sincere condolence and sympathy to his young widow and sorrowing relatives on the early termination of a promising business career.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES FROM DERBYSHIRE.

TECHNICAL INSTRUCTION IN BEE-KEEPING.

[1892.] The D.B.K.A. has this year again been fortunate enough to obtain a grant from the County Council in aid of technical instruction in bee-keeping. Up to the present some fourteen lantern lectures have this year been delivered in different places within the county, the average attendance being slightly over 100. A large amount of interest has been evinced, and, judging from this and the questions which have been asked at the lectures, bee-keeping will, no doubt, become more general in the near future. Without at all wishing to be an alarmist, I desire earnestly to urge all bee-keepers within the county to take precautions regarding foul-brood. That the fell disease is with us is without question, and that the area infected is extending is, I am afraid, no less true, several cases having been reported as existing to the N. of the Trent. The bee-keeper should see that the utmost cleanliness and order is maintained in his apiary—any broken or old combs should be melted down, whilst old coverings and propolised quilts should be renewed. Hives out of use should also be scalded and thoroughly disinfected. One or two pieces of naphthaline should also be placed on the floor-board of every hive, and when it is time to feed the bees naphthol beta should be used. Any bee-keeper who finds his bees are suffering from foul-brood should report the fact to the secretary of the association without delay, so that steps may be taken to assist him to treat his own bees and to protect those of his neighbours.—T. W. Jones, *Etwall.*

TAKING BEES

FROM WALL OF HOUSE IN FEBRUARY.

[1893.]—It may interest your readers to hear how I got a lot of bees out of a house which had the plaster blown off one side of it during a gale of wind in February, 1893. It was an old-fashioned house, and plastered both sides of the studs, leaving a hollow space, in which the bees had ensconced themselves. There had been a white frost the night before, and thinking the bees would not be much trouble if attacked early, I started operations about 8 o'clock a.m. The bees being 20 ft. from the ground, I mounted a ladder, and found them clustered very closely in the centre of the combs. I began by getting the honey first, and sent about 6 lb. to the owner of the house. The rest of the combs, including bees and honey, were put in a box brought for the purpose, and carried home. I could not secure all the bees, but got into my box a good-sized swarm. There was a patch of brood on opposite sides of two combs as big as my hand, but I did not see the queen. The bees were kept confined in an unused room till the last week in March, when they were taken outdoors and set in a warm corner. About the middle of April I put them into a clean hive with two frames of drawn-out combs and one frame with brood on out of another hive, making a sort of nucleus of them, and giving 2 lb. of syrup.

They reared a queen, and I kept adding frames as the bees got crowded, till they had

seven frames in the hive by July. I gave them 7 lb. of syrup about the middle of August and left them for the winter of 1893. That hive now is the strongest I have got, and filling the shallow body fast. I don't suppose I should have kept them going if it had not been for the very warm spring last year. I have used the wide W. B. C. end for the first time this year in shallow bodies, but fancy the bees do not begin working in the frames quite so soon as when spaced by the narrow ends, although I put them on bars which I had extracted from last year. 1. Is this your experience? Three of my hives with 1892 queens have swarmed, but four which I re-queened last year have not. 2. Do you think keeping young queens in hives with plenty of room prevents swarming? 3. I find the hives with old queens are simply "chock full" of drones, while those with young queens have very few.—WAT. KING, *Suffolk, June* 13.

[1. No, our experience with the wide end this year is quite a success, so far as the season has allowed it to become one. 2. Young queens are always less inclined to swarm than old ones, and in consequence it lessens swarming to keep only such. 3. There is no reason for having hives "chock-full of drones" other than that too much drone-comb has been built, which means bad management on the part of the bee-keeper.—EDS.]

A BEE-KEEPER'S LAMENT!

[1894.] Pity the sorrows of a poor young bee-keeper, or rather bee-loser, for I have just discovered my only remaining—or as I thought remaining—stock has fled; disappeared without leaving more than a couple of poor straggling bees behind. I will endeavour to tell you the history of my bee experiences:—In the spring of 1892 I began with a swarm which went on all right in a bar-frame hive, but doing nothing in the sections. At the end of the season the bees were packed for winter by an old bee-keeper, who told me they would "weather the cold," but, alas! in the early spring of 1893 I found them all dead, with their heads sticking in the combs. I had taken no honey from them, and did not understand feeding. I at once determined to get another lot of bees, and accordingly obtained a fresh swarm, which did well last year, insomuch that I took quite a couple of pounds of honey from them, and still left them ample. Nevertheless I fed them in the autumn and again in the early spring. They were going on beautifully, and when the warm weather came in March I ventured to put on a crate of sections. They got checked a bit in April, owing to a fire occurring not far from my garden, and the firemen bringing their hose through I had to shift the hive, but returned it next morning to old spot, apparently none the worse. There was plenty of honey in the combs, heaps of bees, and they had been fed up to end of March with syrup. Then the cold weather came in, and I watched the hive carefully, not disturbing the inmates, and when the fresh warm weather came on Sunday last the bees turned out, working well. A heavy rain came on Wednesday, and on Thursday evening I wondered on looking at the hive how quiet it seemed. During the day, I should tell you, in my absence, my wife had transplanted some flowers, rather tall ones, within 2 ft. of the hive! In the evening, being alarmed at the non-appearance of bees, I opened the hive, and, as already stated, found all—queen and every bee but two—had entirely vanished. Now, that puzzles me. I may state that there are building operations, in consequence of the fire already referred to, going on near—not ten yards away. I am not to be daunted, however, and I have already another swarm ordered.

What do you think was the cause of the bees leaving? There was some honey in comb, though not much, but they had been working well for some days before. It is strange—to me.—GEO. ROOKE, *Salisbury, June* 8.

It is, of course, very discouraging to have so many mishaps, and encouraging to know that our correspondent is still undaunted. We would, however, suggest an additional investment to that of buying another swarm, in the shape of a good book on bee-management. If this is carefully read and its teachings taken to heart, our "poor young bee-keeper" will, we think, have a more cheerful record to send us next time. We cannot tell why the bees decamped, but very probably could if we lived next door to our correspondent. But he may rest assured that his bees will not be difficult to keep alive, and yield him a better harvest than "a couple of pounds of honey" in a season if he will take a little trouble in learning "how to do it," as we have suggested. —EDS.

AFTERNOONS WITH SOUTH AFRICAN BEE-KEEPERS.

NO. II.—MR. HOLDSWORTH.

[1895] On the main road between Cape Town and Simons Town lies the little village or suburb of Rondebosch, and here it was that I went one afternoon in January or February last in company with a friend to see the apiary of Mr. Holdsworth, a bee-keeper who is very well known locally. Mr. Holdsworth is a builder, and we found him in his garden busily engaged putting up a greenhouse, for it was a Saturday afternoon, and horticulture is one of his chief hobbies.

It was not long before we had a look at the bees, of which there were twelve or fourteen hives, all of Mr. Holdsworth's own make. As will be seen from the illustration (which is from a bad photograph taken in a high wind and failing light), each of the hives is provided with a hinged side, fitted with glass internally, for inspection; several large augur holes are also provided for ventilation, which Mr. Holdsworth considers very necessary in

this climate, where the thermometer frequently registers 100 degrees in the shade during the summer. Although the summers are so hot and dry, I have never seen water supplied to bees at the Cape; but this may in part be accounted for by the fact that the night dews are often very heavy, and condensing on such large-leaved plants as the banana (a leaf of which is seen in the illustration just in front of Mr. Holdsworth's arm, and a tall plant of the same just behind him) may readily be utilised by the bees in the early mornings before the powerful heat of the sun has had time to dry it up.

Mr. Holdsworth works principally for comb-honey, and, with very little available time or attention to bestow on his bees, usually manages to secure a surplus of from 20 lb. to 30 lb. a hive. His hives are all single-walled, and the sides of the frames stand about an inch clear of the hive walls; yet he tells me that he is never troubled by the bees building comb in this space. Propolis and the large red bee-parasite are both very troublesome in this apiary, as they are also in Mr. Attridge's at Sea Point. At the time when I saw them the bees were, of course, doing practically no work, and I had not time, unfortunately, to avail myself either of Mr. Holdsworth's or Mr. Attridge's kind invitation to see their bees again in May (the early autumn), when the first flowers begin to yield a supply of honey sufficient to make itself appreciable in the increased activity of the internal economy of the hives; bnt I hope to have an opportunity of doing so next year.—G. GORDON SAMSON, 25, *Edgar-road, Margate.*

[It is very interesting and curious to learn that bees in South Africa will not fill up with comb a 1-in. space between frames and hive sides. We should have thought it certain they would act as in this country, and there would be no mistake about their doing so here. We trust, however, our correspondent may have an opportunity of verifying the actual measurement when next he visits the colony and Mr. Holdsworth's apiary, and that he will send in a line of report thereon. —EDS.]

BEES AND MARTINS.

[1896.] As I stood in my apiary to-day, I noticed six martins continually flying among the bees overhead, and, sometimes coming quite close to the hives, catch several bees on the wing. The latter seemed to chase the martins when they came close to, so, "thinks I to myself," I will see whether you eat them or not. I got my gun and soon brought one down, and on having a *post mortem* exam., found legs, wings, and other parts of the bee's body in it. I have always been a good friend to the martin; have let him build his nest in my lodge, rear his young, come and go every year, never disturbed him, and listened to his twittering with joy on his return, to think that we have summer with us once again; but I fear for the future he has made me his enemy.

I shall be glad to know if you think the adverse weather we are having is the cause of them taking bees, as no doubt it has stopped all progress in insect life, and being short of food, they have to take what they can get. If any of your correspondents have noticed anything similar, they ought to take the precaution, and destroy all the young and old they can, as it must be a tremendous strain on the hives when they take them as they do, for they are at it all day long to feed their young.—JOHN LYON, *Soham, Cambs., June* 11.

[We have never classed the martin as one of the bees' enemies, and your idea that scarcity of insects on the wing at the time has caused the mischief is probably correct.—EDS.]

"WELLS" HIVES.

DO THEY CONTAIN ONE OR TWO COLONIES?

[1897.] I should much like, with your permission, to reply to Mr. Wells' letter (1888, p. 244) in last week's BRITISH BEE JOURNAL. Mr. Wells thinks it unfair I should depreciate his system without having tried it, but he goes on to stoutly maintain that his double-queened hives are only one stock. This I have always demurred to, and until I had persuaded myself that his two-queen hives are only one stock it was useless experimenting with them. I think this question might, with advantage, have been long since ventilated in our journal, because unless you can call the two-queened hives one stock the system is valueless.

Mr. Wells says, "Does this adding of a *single bee* make the hive two stocks?" I reply, "Certainly not, *at the time of introduction,*" but then at that time Mr. Wells is getting no advantage from his two queens. In the spring those two queens breed up until they are as strong as any other two stocks in single hives, and then they are certainly two stocks. Where would his other hives be without that "single bee?" Where would the wasps' nests be without that "single queen wasp?" There *must be a time when your nucleus hives become established stocks* whether wintered in double hives or by themselves, and that time most certainly arrives when they have bred up in the spring.

Mr. Wells makes a point of showing that his system costs nothing extra because he gives his single stocks spare queens, which would otherwise be useless; but it is not a question of cost of production, or I might add a swarm that was given me to another of my own, and say the honey result was from one stock (or swarm).

Again, it is quite possible to divide a strong stock in the late summer into four nucleus hives, which would build up strong in the spring, and if you then made them, which is quite possible, work in one super, does Mr.

Wells still mean to say they are only one stock? I think we are much indebted to those bee-keepers who make their experiments public in the B.B.J., and I always read Mr. Wells' letters with interest, although I do not agree with them. Mr. Wells is quite right in saying it is impossible to compare different districts.

This is only a poor honey district, although occasionally we get large results. After the meadows are cut there is no white clover anywhere near. Of course, I am speaking of my own immediate neighbourhood. There is still very little honey coming in here, but the white clover in the meadows (not the sheep pastures) is not yet out, so that if it keeps warm and fine for the next two or three weeks we may still have a fair harvest.—ARTHUR J. H. WOOD, *Bellwood, Ripon, June* 23.

"WELLS" HIVES.

DO THEY CONTAIN ONE OR TWO COLONIES?

[1898.] In endeavouring to prove that twice one does not make two, and after explaining a neat way of making two by division, Mr. Wells (1888, p. 244) asks the question, "Does the addition of a *single bee* make it into two stocks?" I have no doubt that Mr. Wood will answer most emphatically, "Yes, under the circumstances it does!" And, further, if Mr. Wood asserts that every queen with more than one brood-comb constitutes a colony, he will be in no danger of contradiction by able and well-known authorities. But what, I would ask, has this to do with the success or advantages of the "Wells" system? We have been waiting patiently for reports of the heavy takes of surplus honey which would entitle Mr. Wells to all the credit he deserves; but if the success of the system depends upon counting two stocks as one, and if he is offended because some of us prefer calling a spade a spade, then he is simply courting ridicule instead of gratitude, for no amount of argument will alter plain facts. Suppose the young queen which he introduces after slipping in the perforated dummy is a ligurian, while the other is black, will he have the hardihood to say, Here is a single stock of bees, half of which are foreign and half English? If so, he will have to invent another name, because "swarm," "stock," and "colony" cease to convey a definite meaning, and I should like to know what name Mr. Wells would give to the same colony which he describes in his letter referred to, supposing the dummy which separated the two parts were of solid timber instead of being perforated? Is it possible the "Wells" dummy has this magic power of making what is undoubtedly two separate stocks one stock only, and that, too, for the sake of comparison with other systems?

If this is what Mr. Wells claims, I ask his able and well-known authorities to declare themselves.—THOS. F. WARD, *Highgate.*

SWARMS FOR WELLS HIVES.

[1899.] Oh! that my name were A. J. H. Wood, and that I lived at Ripon! It seems I did not make myself clear when referring to a swarm from Wells hive on April 29 (1871, p. 215). In fact, I did not write for print, but was having a friendly word with the "Manager," forgetting that—

A chiel's amang ye, takin' notes,
An faith he'l prent 'em.

The hive was not supered at the time it swarmed, and as honey was coming in from the fruit trees, I tried an experiment *with the swarm*, risking the loss of a big surplus from the parent stock, and if I do lose it, shall not condemn Mr. Wells' system for the result. The said swarm swarmed yesterday (Friday, 15th inst.), what is here termed a "maiden swarm," and the other compartment of the "Wells" hive swarmed to-day, with an abundance of room in the super; both lots were, however, put back to where they came from. I have a few sections, but not from a hive "after the queen and bees were gone." In the slack season, as friend Walton suggests on page 238, I may, with the editor's permission, give an account of my experience with a double-queen hive, when Mr. Wells will be able to point out other mistakes; but perhaps not more clearly than I shall be able to see them myself then. I extracted some honey from shallow frames just a week ago, and it is now granulated, both in the manipulating house and in a warm room.—W. H. WOODS, *Hemingford, June* 16.

THE "WELLS" SYSTEM.

ANOTHER ADVANTAGE OF THE SYSTEM.

[2000.] On Thursday last a large swarm was placed in one compartment of a home-made "Wells" hive upon worked-out comb and stores. In the other compartment there were about twenty bees and a queen also upon worked-out comb and stores. That evening the entrance of the swarm was contracted so as to compel some of the bees to pass out through the chamber containing the small quantity of bees and a queen. Next day the two chambers were occupied by a busy tenantry, and now, on Midsummer's-day, the two queens are laying.

In another "Wells" hive used last year, and this, the perforated division board in which the holes were burnt has not been propolised.—"W.," *Poyston, Pembrokeshire.*

A CHEAP ROOF-PROTECTOR.

[2001.] In "Notes by the Way" (1887, p. 24), Mr. Woodley truly says that heat is the cause of foundation stretching. In fact, a breakdown may happen in less than an hour during hot sun at mid-day, though it might be cold enough at night. My own plan of lessening the risk is to always use ordinary roofing-slates on the roofs of all my hives. The

size I use are 24 in. by 12 in., and two of these are just the size to cover my hives; they cost me only 2d. each. I leave them on all the year round. In winter they serve for preventing roofs being blown off, and not a drop of water can get in, though there are many cracks, of course, in my roofs. During snowy weather also, all my roofs are dry and airy, and I can lift off the slates and throw away all snow in a moment. While in summer the great heat will not touch the roof at all, because there is about 1 in. (more or less, according to the construction of the hive) between the roof and the slate.

If the roof is perfectly flat like a table, a piece of wood will be required to hold up the slate from touching it, so as to make a little airy space, and during the hot weather of last summer I had always a small stone under the edge of the slates on both sides, to make still more air space, say, about 2 in. or 3 in., and by this treatment all my hives have always nearly the same degree of heat. This makes me suggest some sort of double roof, the upper of hard metal, made to hinge together at the middle, so as to fit roofs of different size and shape, as well as to lift up the lower edges during hot weather. This would make a splendid shade for keeping off heat. Slates, of course, may get broken, but with care they will do for years. — CONSTANT READER, *Pwllheli, June* 23.

Queries and Replies.

[1080.] *Failures in Nucleus Forming.*—A swarm came off from one of my hives (a W.B.C.) to-day at 12.30, being the third in twenty-two days. The first, on June 7, missed the queen and returned to parent hive, concerning which I wrote you (see reply to T. W., 1,066, p. 235, in B.J. of June 14). The second swarm came off a week after the first, which you said in reply would be a first and second swarm combined. This I hived on the old stand, after forming three nuclei of the parent stock. I have fed them (the swarm) about a pound of syrup each evening since. The swarm which came off to-day clustered three doors away on a gooseberry bush. I hived them in a skep, and not having seen from which of my four hives it issued, I knew by seeing some hybrids among them that it must have come from one of my two hybrid stocks, so naturally thought they came from the one that had not swarmed this season; but such was not the case, for I found the hive crowded as usual this season, and on taking out the frames not a single sealed queen-cell was to be seen, only a few just started. I therefore concluded that the other mixed hive was the one, which on examining I found to be right, so returned the swarm after searching the combs for eggs or brood, and finding no trace of either. Of the three nuclei formed eight days ago one has a queen and no brood, another a queen-cell capped, and the third neither cell, queen, or brood. I shall thank you for advice as to this. —T. W., *Cheltenham, June* 23.

REPLY.—If a ripe queen-cell was given to each of the nuclei formed, we cannot understand the result as stated, except by supposing one was managed rightly and queen is there, that only an abortive cell was given in second case; but what of the third, if given at all? This being so, the second and third nucleus stocks must be re-joined to the first.

[1081.] *Preserving Queens.*—1. Is the enclosed queen an old one? I removed her from a foul-broody hive, and replaced her by another. 2. Is naphthaline a sure preventive of foul-brood? 3. Can you tell me how to fix the enclosed robber-trap on hives? I had it and several similar given me, but do not know how to use them; also the name of maker. 4. Is enclosed candy suitable food for a queen in a travelling cage? 5. How long would it be advisable to keep a queen in a cage if a fresh supply of candy was given?—GEO. DALE, *Stafford, June* 18.

REPLY.—1. Queen is an old one. 2. It is only claimed for naphthaline that it is an excellent preventive against the spread of foul-brood if constantly kept in hives. To call it a "*sure* preventive" is going further than we care to, though we have had cases reported of not only preventing, but curing, the disease. 3. We do not understand fixing the trap sent, nor see how it can answer the purpose of stopping robbing or trapping robbers. 4. Candy will be better than sugar if *finer* grain is used. This mixture into a stiff paste of sugar and honey is known as "Goode" candy. 5. The cage sent is for the purpose of introducing queens, and not suitable for keeping them in for several days. If a dozen or more bees are put along with a queen in a combed section, with a little food in the cells, they may be kept alive two or three weeks with warmth and care.

[1082.] *Helping Swarms.*—About the beginning of last May I got a swarm which I hived on ten frames with full sheets of foundation, and through the bad weather they have only filled about six frames with comb, &c., and so I want to know whether it is necessary that I should still continue to feed them, or whether they can now feed themselves?—BEGINNER, *Shortlands, Kent, June* 20.

REPLY.—If the present fine weather continues there should be no need for feeding swarms of last May.

[1083.] *Why Swarms Return to Hives.*—Can you give any reason for swarms returning to hive time after time after being hived in skeps? One of my stocks appeared to swarm on 14th, but returned instead of clustering; they came out again on 15th, and clustered after flying about for five minutes; they were

then hived in skep, which they left after half an hour and went back a second time. On 17th the swarm came out again, I got them into skep, and all seemed quiet for about an hour, then they returned again to the parent hive ; can it be I hived them too soon, or was the queen not with them? Would the bees have clustered on a tree without the queen being with them? — J. W. WHITAKER, *Chatham, June* 19.

REPLY.—As a rule, the return of swarms to the hive is caused either by some physical defect in the queen which prevents her from taking wing with swarm, or because of some mishap to her during the process of hiving. The usual course of deciding which of the two causes named are accountable for the return of the swarm is either to examine combs to see if the old queen is still there, or to await the usual interval of eight days and listen for the queen "piping" which may be heard on placing the ear close against the hive in the evening of eighth or ninth day.

[1084.] *Bees and Trifolium.*—Do bees gather honey or pollen from the flowers of trifolium? There is a plot of about two acres close to my hives, and I find it is literally alive with bees on sunny days. I have a two-fold object in asking this question, first to satisfy my own curiosity; and, second, because I find trifolium is almost unknown in this county (Lincoln), although I understand a great quantity is grown in the south. If it is really good for bee and beast, bee-keeping farmers would find it to their interest to grow it.—NOVICE, *Lincs., June* 19.

REPLY.—All clovers are included among the various *trifoliums*, but that which is commonly called by that name is *trifolium incarnatum*. It yields honey in good quantity, but not of such excellent quality as that from white clover.

[1085.] *Queen Fertilisation.—Foundation for Swarms.*—1. On Saturday, the 16th, I had a first swarm from a bar-frame hive. On an examination for the queen-cells supposed to be left I found none. To make sure, I went carefully over comb twice. Is not this unusual? I saw no eggs, but advanced brood in abundance. Do you suppose there was a young queen hatched out preparatory to the swarm issuing? 2. What would be an approximate date for young queens to be laying in nuclei made up on June 4, supposing successful hatching and fertilisation? 3. If a second swarm does not come off a skep, am I likely to have a small super filled if put on? 4. Which is better for swarms, starters or full foundation? This query is suggested to me by several full sheets of foundation giving way in recent swarm.—ENTHUSIAST, *Gloucester, June* 19.

REPLY.—1. If you are quite certain that no trace of queen-cells are in the hive the occurrence is to us unaccountable. 2. Queens begin to lay in from six days to as long as three or even four weeks from date of hatching out, the variation in time depending on the weather. 3. As before, we may say all depends on weather and the amount of honey secreted. Seasons differ so in this respect that no safe guess may be ventured on. 4. Full sheets, but they must be made secure. Care must also be taken that the foundation does not give way through the high temperature which often prevails during the first day or so in hives after being peopled with a good swarm.

[1086.] *Bees Dying.*—I have two hives from which during many weeks past the bees are continually falling off the alighting-board, trembling and creeping on the ground, and then die, quite a heap every day, and yet they keep very strong indeed. On looking into the hives the only thing I see wrong is a lot of the bees dead in the cells—bees that have entered and died therein. I would be much obliged if you could tell me the cause and the remedy?—A SUBSCRIBER FROM No. 1, *Caton, June* 19.

REPLY.—The symptoms first described point to the complaint referred to in reply to "E. Kirk Brown" on p. 249 of last week's issue, to which please refer. On the other hand, bees dying in the cells after entering them as stated suggests famine, or that they had got separated from the cluster and the food in very cold weather, and so perished for want.

Echoes from the Hives.

Beemount, near Bromsgrove, June 16.—The weather has been a trifle better these last three days. On Thursday the thermometer registered a shade temperature of 70 degrees, the maximum for this year at present. Some honey was stored in the hive during the day. Upon inspecting the hive in which I had inserted eggs and brood I found two capped queen cells, and as it was then only the seventh day from the time comb was given to this stock, the queens are, I suppose, being reared from larvæ and not from the eggs. I always thought pea-blossom yielded nectar, but this year I have failed to see a single bee upon it ; the broad-bean bloom is, however, greatly patronised when weather permits. — PERCY LEIGH.

Whitby Heath, Chester, June 18.—White clover is just showing blossom here and there, and bees would do well if the right weather would but set in. I have heard of a few swarms rising from those old-fashioned and miserably cramped small hives that are still to be found in this part of Cheshire. The queen I mentioned previously as successor to a deposed one, which I at first supposed had not been fertilised in time, is doing very well. I mention this because my case, as far as I can judge, is much the same as that of querist

1,067, p. 235. I was much concerned in finding cells empty of brood for a full four weeks, but as you see all has come well in the end.—A. DOUBAVAND.

Northampton, June 24, 1894.—Extreme disappointment is the general feeling prevalent among bee-keepers of this neighbourhood at the unpromising condition of their stocks. Contrary to long experience, the bees, after a mild winter, came out unusually strong, and made steady progress in February and early March. On the 25th of the latter month a spell of glorious weather set in, and the bees forged ahead amazingly. Calls for more room were urgent, supers were put on, and partly filled; entrances opened to the fullest extent, and by the third week in April swarming commenced in earnest. Then, alas! a change came o'er the scene; cold, windy, and wet weather set in; swarming ceased; supers were cleared; drone larvæ cast out; and brood-rearing was discontinued. May and the first three weeks in June were, with the exception of a few days, quite a dead failure so far as bee-foraging. The longest day brought warmer weather; for four days a fair amount of work on beans, raspberries, and blackberries was done; clover is scarce at present; and the limes are not yet in bloom. It is difficult to see how the season can be saved now, as an entrance of 2 in. is at present amply sufficient for stocks which six weeks ago required one extending the whole hive front. Queen wasps are still searching for nesting places. Honeydew is superabundant.—F. C. B.

Solihull, Birmingham, June 25.—I had today a big swarm, which weighed 6½ lb. The bees are hybrids from a stock I bought on five frames from a dealer at the end of March last. Shallow frame supers were on the hive, which still seems full of bees.—B. BOOTHROYD.

Bee Shows to Come.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances. Liberal prizes. Entries close June 29. S. Upton, secretary, St. Benedict's-square, Lincoln.

July 20 and 21.—Bristol District B.K.A. at Knowle. Schedules from Messrs. J. Brown and E. A. S. Cotterell, 42, Baldwin Street, Bristol.

July 21.—Wotton-under-Edge, B.K.A. Show of honey, &c., in the Fete Ground. Entries close July 14. Hon. Sec, G. Gunston, Wotton-under-Edge.

July 26.—Notts B.K.A. Annual County Show at Southwell. Liberal prizes. Open classes for appliances, hives, and extracted honey. Entries close July 19. Secretary, A. G. Pugh, Mona-street, Beeston, Notts. Other shows connected with the Notts B.K.A. will be held as follows:—Lowdham, July 19; Hucknall Torkard, July 24; Beeston, August 6; and Moorgreen, September 4.

July 27.—North Norfolk Bee-keepers' Association. Great show of honey at Melton Constable Park. Liberal prizes. Entries close July 18. Schedules from C. J. Cooke, Edgefield, Melton Constable.

August 1, 2, and 3—At Beverley, Yorks. Prizes for bees, honey, and appliances. Entries close June 23. Marshall Stephenson, secretary, York.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules from W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

MISS COOKE.—*Glazing Section.*—By the term "glazing sections" is meant fixing a square of glass same size as the sections on both sides thereof. The glass is usually fixed by a narrow margin of lace-paper pasted over the junction of wood and glass.

A. PRATT (Exeter).—As there is no trace of brood at all in comb sent, it is impossible for us to say if the stock is foul-broody or not.

R. W. HEATHCOTE (Ringwood).—*Lime Trees not Flowering.*—We know of no species of the lime tree which never flowers. Perhaps your trees have not yet reached the age of flowering.

LEATHERBARROW (Birkdale).—*Judging Age of Honey.*—Experience only enables a person to judge whether honey is of the current year's gathering or not.

D. W. LEWIS (Fishguard).—*Drones with Swarms.*—1. It gives cause for suspicion to see drones tolerated with swarms for some time after hiving; but why not examine the frames to see if queen is all right? 2. Feeders are set above the feed-hole in quilts, with a feeding-stage on which the bottle is set.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

FINE SWARMS, 3½ lbs., 10s. 6d. each, packed free. LEMIN, 72, Hoe-street, Walthamstow. E 31

WANTED, two strong SWARMS of BEES. Exchange Extractor, good condition. WILLIAM PARSONS, Esq., Ashurst-place, Langton, Tunbridge Wells.

A BARGAIN.—Six Neighbour's "SANDRINGHAM" HIVES (painted), been used, in good condition, £3 10s. A. A., King William-street, Strand. E 27

FOR SALE, "WINDSOR" EXTRACTOR, by Meadows, good as new, price 9s. R., *Bee Journal* Office, 17, King William-street, London. E 26

NEW HIVES, standard size, ten frames, stocked with strong swarms, packed on rail, 18s. each. CRAWSHAW, White Hill Apiary, Welwyn, Herts. E 30

FRESH KERRY BUTTER at 1s. per lb. and postage. Apply Miss FITZGERALD, Glanleam, Valencia Island, Ireland. E 29

STRONG stock of BEES, in standard bar-frame hive, 33s. carriage paid. Young, prolific QUEENS, 3s. 6d. post free. WILLIAM H. BULCOCK, Riversdale, Clitheroe. E 28

BEES, NATURAL SWARMS, healthy and strong, free from foul brood, 10s. 6d. each, boxes 2s. 6d. if not returned. E. LONG, Cottenham, Cambs. E 23

FOR SALE, FIRST SWARMS of splendid Honey Gatherers, all '93 Queens, packed free 10s. 6d. Safe arrival guaranteed. J. PARGETER SMITH, Cropreay, Leamington. E 21

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PURE ENGLISH BEES, splendid strain. Small swarm with queen, 5s., larger, 10s. 6d., superior, 15s., queens, 3s. all on rail. ALSFORD, Expert, Blandford. E 19

ON SALE, a MANIPULATING TENT, in good condition. For price and particulars, Mr. ISAAC BUSH, Beechfield Nursery, Bowdon. 223

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

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PRIME natural Swarms of my selected strain of the above, headed with 1893 Queens, carefully packed, and put on Rail, 15s. each. The ungenial weather during May has made the swarming season unexpectedly late. Customers may rely on every effort being made to fill orders as promptly as possible. W. WOODLEY, Beedon, Newbury.

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HOP ALE, sparkling, refreshing, made for 3d. gallon. Recipe 7d. TURNER, Limpsfield, Surrey. E 14

FIRST SWARMS of my splendid strain of BEES, which cannot be excelled, 15s., packed free. JOHN WALTON, Honey Cott, Weston, Leamington. D 95

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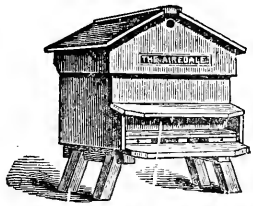

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LINCOLNSHIRE AGRICULTURAL SOCIETY.

GRIMSBY EXHIBITION,

July 18, 19, 20.

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STEPHEN UPTON,
Secretary.

St. Benedict's-square,
Lincoln, 15th June, 1894.

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Editorial, Notices, &c.

USEFUL HINTS.

WEATHER.—The continuance of the hot weather and its probable effect on bees warrants us in adding a few "hints" to those of last week, it being very likely that some at least of our less experienced readers will be needing advice just now if they have half-a-dozen or more stocks in hand. We expect that bees will, for various reasons, be very irascible during the hotter part of the day, and inclined to sting if interfered with. If this is found to be so, they should be left severely alone between the hours of 9 a.m. and 5 p.m.—an hour earlier and later will be all the better, if convenient. Any manipulating actually needed will be got through with far more comfort and quietude if performed before 7 a.m. or after 6 p.m., until such time as the bees have had another week or so at in-gathering, which will tend to make them more amenable to handling. Meantime, shade, ventilation, and storage must be provided; do nothing which will tend to irritate the bees, and they will soon resume their quieter habits. Signs are not wanting of the present heat culminating in a thunder-storm, but we are hoping for a few days more of honey weather before a change occurs.

SWARMS.—As expected, swarming has become very general, and in some places excessive, not a few bee-keepers being quite perplexed what to do, so plentiful have they been. We have reports of swarms issuing simultaneously and joining while on the wing, thus rendering it difficult to return them even where increase is not desired. In such cases it is best to let the bees remain for hiving in one lot, and use some quieting agent if signs of fighting are seen. A good dredging with flour as the combined swarms are running into the hive will usually stop slaughter, or they may be sprinkled with very thin syrup—little more than well-sweetened water—scented with a few drops of aniseed or peppermint, after throwing them out of the hiving skep. A large lot of bees, consisting of several swarms, joined in this way, may have a good weight of surplus work given them at once above their new brood-chamber, and will render a good account of themselves if the bee weather holds out for a couple of weeks longer. The stoppage of swarming this season, just when, in the ordinary course, it would have taken place, has also resulted in the deposition of a number of old queens, which otherwise would have accompanied the first swarms, and in consequence the latter will have virgin queens at their head. Care should therefore be taken to watch for queens as they run in with the bees, and if seen to bear the more slender and taper form of the abdomen which bespeaks non-fertilisation, it will relieve the mind of the bee-keeper as to re-queening in autumn.

WIDE COMBS IN SURPLUS CHAMBERS.—We have, in common with others, had a little unforeseen trouble with these, which may in a measure be attributed to the season, in this way:—Some boxes of shallow frames being used with the new "wide ends," and nearly full of honey at the time, had for certain reasons the second boxes of ready-built combs given *over* instead of under those first put on. The frames of the latter chanced to have very narrow bottom bars, and when the late rush of honey came the bees completely built these narrow bars into the comb, continuing the latter down to the combs below and joining the two boxes into one so far as the sealed combs. Of course, we shall have to revert to a disused plan of drawing a wire between the two boxes to sever the attachments, and by inserting a thin wedge at each corner, raise the upper box $\frac{1}{8}$th of an inch, and allow the bees an hour or so to clean up the dripping honey before removing the surplus. In preventing a recurrence of the trouble, we are again bringing into use the long discarded adapters—formerly used under all supers—of thin wood, cut the same size as the shallow-frame boxes, and having narrow slots along two sides, which admit the bees to the upper chamber. They have also narrow strips of wood on the under sides to give a bee-space above the frames of lower boxes. These adapters prevent combs in duplicate chambers being joined together in the manner of which we have been complaining. Moreover, the bottom bar of frames is sometimes so effectually built into the comb as to be out of sight altogether. Consequently it gives the frame of comb a very handsome appearance for exhibition.

ROYAL AGRICULTURAL SOCIETY.

THE SHOW AT CAMBRIDGE.

The fifty-fifth annual show of the "Royal" was held at Cambridge on Monday, June 25, and four following days, in beautiful summer weather, which continued without a break during the whole time the exhibition lasted. The showyard was situated on Midsummer Common, a convenient piece of ground somewhat limited in extent when compared with some Royal shows we have attended, but easy of access from the station, and close in to the town. The show opened under the most favourable auspices, having a popular president in the Duke of Devonshire, the promise of his usual visit from the Prince of Wales and his son the Duke of York, together with the fact that the total number of entries in every department of the show reached the large figure of 9,210. There needed but sunshine to make everything go off well, and this was, as we have said, abundantly granted.

The total number of visitors who passed the turnstiles during the five days was 110,311, and it is, therefore, safe to say that the Cambridge year will be reckoned among the Society's successes. It is now fifty-four years since the last visit of the R.A.S. to the University town, and the contrast is worth noting in that the show of 1840 was then counted as the largest of the kind ever held, the entries numbering 452 !

THE BEE EXHIBITS.

In the Bee department, with which we are more immediately concerned, the entries reached the respectable figure of 222—the largest entry for some years past in the honey classes, which numbered 166 of the total number. On this account it was doubly disappointing to have the show opening in splendid honey weather, while bees were gathering nectar fast, but just a week too late in starting to enable more than a very diminished portion of the honey exhibits to be staged. It is, however, gratifying to note that bee-keepers who are honey-producers on a fairly large scale still maintain their interest in this the premier show of the year, the fact being evidenced by no less than eleven entries —six of which were actually staged—in that most troublesome of all classes, the one for collections, or most attractive displays, of honey in any form. Viewing the honey classes as a whole, the enforced withdrawals, caused by the adverse weather of the few weeks preceding the show, told heavily against the fulness of the display, but, considering all things, a fairly good show was made, very creditable in particular to those who pluckily stuck to their entries, and held on so late as to bring their sections with them to the town and the show straight from the hives.

It was matter for regret that in the class for collections of bee-appliances only two competitors appeared. This made the competition less interesting than it might otherwise have been, but the quality and quantity of the goods displayed in a great measure helped to atone for the limited competition, and whether satisfactory or not to the exhibitors who sent collections, it may be very safely said that their goods would have been difficult to beat by whoever opposed. On the other hand, it is not easy to understand why prizes of £5 and £2. 10s. should not be worth competing for by more than two manufacturers at a show which most persons take to be the most important of the whole year ; held, moreover, at a season when orders are still being given for bee-goods.

APPLIANCES.

Class 302. *Collection of Hives and Appliances.*—The first prize collection of Mr. W. P. Meadows was a large and highly meritorious one. Nothing either faulty or stale did we notice in the whole of the goods shown, while the number of novelties contained in what is known as the "extras" portion of the display was quite remarkable. Among the most pretentious of the novelties was another attempt to solve the question of providing an efficient uncapping machine for rapid work in large apiaries. It was worked by foot-power with knives of novel construction, and we hope to see this machine staged in an appropriate class, where its merits might be more fully gone into as a separate exhibit, and its application to the use for which it is intended put to a practical test. We have not space to enumerate even a part of the large number of things shown on this stand. The hives were replicas of those shown in other classes, and the tinwork of all kinds for bee-purposes was unusually large and comprehensive.

Mr. Redshaw's second prize collection was also a very excellent one, not so large as the first-named, but of excellent make and efficiency throughout.

Class 304. *Best and Most Complete Frame-hive for General Use.*—With exactly the same number of entries (nine) as last year, Mr. W. P. Meadows got first place for what he terms his "X L hive on the W.B.C. plan," price 21s. An exceedingly well-made and complete hive at the price quoted. It embraced loose stand and floor-board combined, body-box of ten standard frames with dummy, shallow-frame box, also holding ten frames, rack of 21 sections, outer-case, lifts, porch, having a simple but cleverly-contrived adjustable entrance, and good roof with bee-escape ventilation, making up a very "complete hive for general use," as per schedule. Though affording ample protection against wet and cold, all the working parts were made as light and portable as possible consistent with durability. The second prize was awarded to Mr. C. Redshaw for a similar hive (price 24s.) to the one with which he gained first at Chester last year, and at Warwick in 1892. The same exhibitor also gained third prize for his well-known "Royal Notts Hive," price 18s. 6d.

Several other good hives were staged, but, as we observed in our report of last year's "Royal" show, it was surely an oversight to enter hives of an elaborate and complicated type—constructed for working bees on the double-queen system—in a class specially designed to bring out the best hive for general use. We cannot believe that any manufacturer would seriously contend that such hives come within the category intended by the framers of the schedule. Size, unwieldiness, complication in working, and high price, all combine to place this type of hive outside the competition in the class under notice. Moreover, the fact of the judges at Chester last year having apparentely taken this view by passing over hives of this kind, renders their reappearance at Cambridge the more unaccountable to us otherwise than as an oversight on the part of the exhibitors.

Class 305. *Most Complete and Inexpensive Frame-Hive for Cottagers' Use.*—The competition in this class was unusually limited, only four competitors appearing. It makes one wonder why this should not be the largest class in the show, in view of the fact that the inexpensive hive should be the popular and most generally-used one, if it can be made to possess efficiency along with cheapness. However, we have only to record what took place without inquiring why there were so few entries for moderate-priced hives. Mr. Meadows and Mr. Redshaw again divided the honours, as in 304, the former taking first prize with a neat little hive (price 8s. 6d.), for which sum was provided a loose floor-board, body-box with ten standard frames, rack of twenty-one sections, excluder, quilts and roof. Extra good materials and workmanship combined to help this hive into top place. Mr. Redshaw, as before, carried off second and third prizes with hives priced 10s. 6d. each, but of different types, each having surplus chambers and all needful requirements for a complete working hive. The unplaced hive might, we thought, have been in a different position had it not lacked quality both in wood and workmanship when compared with the winning exhibits; in fact, but for the demerits mentioned, we liked it as a good working hive, quite as well as some of those placed above it.

Class 306. *Best Honey-Extractor* (five entries).—Here, again, Mr. Meadows took first prize with "The Cowan Rapid," a fine machine with reversing steel cages, non-splashing arrangement, chain-gearing, and cover, priced £2. 10s.; the same exhibitor securing second prize for his latest improved form of the "Raynor," with patent open steel cages, non-splashing arrangement, chain-gearing, and cover, price £2. Both are excellent machines and had a close run for first place. The "Cowan" is, however, more easily unshipped for cleaning, and has the advantage of the combs being reversible without removal. On the other hand, the "Raynor" will extract four combs at once as against two in the "Cowan." For those who desire a lower-priced machine several well-known and useful ones were staged at prices from 21s. to 28s. 6d., a H.C. being given to Mr. Meadows for his well-known "Guinea" machine.

Class 307. *Best pair of Section Racks fitted for use and interchangeable.*—Another limited competition, the three winning exhibits all having hanging frames of the same type for the sections. The first prize pair were similar to those shown last year by the winner, but reduced in size so as to fit the ten-frame hive for which they are intended without overhanging a little on one side as the original had.

Class 308. *Best Rapid Feeder.*—Both first and second prizes were taken by precisely the same form of feeder exhibited by the same winners last year at Chester.

Class 309. *Best and most perfect Bingham Smoker of British Manufacture* (prizes offered by Mr. T. W. Cowan).—Those who have had any experience with the original "Bingham" smoker—and we fancy the donor of the prizes must be included among them—are usually very firmly convinced of its superiority over all other forms of smokers on the market. Any way, we suppose no British bee-keeper had an opportunity of testing the particular form of "Bingham" shown by Mr. Meadows at Cambridge, and the exhibitor was quite right in staging the latest and most perfect form of the smoker devised and sent out in America by Mr. Bingham himself. It is, nevertheless, an uncanny looking affair, with its queer cap and the wire-arrangement for lifting which surmounts the nozzle, besides having the bellows fixed "wrong end up." In one particular the American pattern has been departed from in its having an all-round hand-guard an improvement in the wrong direction to our mind, the real "Bingham" guard being lighter and all sufficient. The new form of smoker may possess all the advantages claimed for it when one gets used to its working, but we must confess to a mighty liking for the older form, and, in any case, we would prefer the bellows fixed wide end down, as in the original. The prize smoker of Mr. W. Dixon was good but decidedly an Anglicised "Bingham."

Passing over, for the present, the classes for honey, we come to Class 318. *For any practically Useful Invention connected with Bee-Keeping introduced since* 1892 (ten entries).—This was a fairly interesting class, including some things which may possess merit, but which we should say undoubtedly require a season's practical trial before receiving recognition at the hands of judges who have had no opportunity of testing them. The reversible super clearer with adapting slide, shown by Mr. Meadows, was awarded a bronze medal, and Mr. John Walton got a high commend for his slow bottom feeder, a useful contrivance for feeding in spring and

autumn with a minimum of trouble and without lifting off roofs or disturbing the bees.

Class 319.—*Most interesting and instructive exhibit of any kind connected with bee culture not mentioned in the foregoing classes, and to which prizes have not been previously awarded.* (Nine entries.) By far the "most interesting and instructive exhibit" (according to the wording of the schedule) in this class was that shown by Mr. Brice, illustrative of certain "modifications of Mr. Doolittle's method of queen-rearing rendered necessary by the exigencies of the English climate." This was shown in a neat glazed frame, in which were arranged in progressive order the cells used for queen-raising from the first stage of preparing the "cups" by the bee-keeper to the perfect queen-cells as formed from them in the hive by the bees themselves. A bronze medal was awarded to the exhibit. Mr. T. B. Blow received a certificate for a fine collection of honey vessels in glass and pottery, as did Mr. C. N. White for a good collection of samples of honey gathered from various sources and places at home and abroad, all of which were named. The combination hive for cottagers' use shown by Mr. H. Seamark, and Mr. W. Dixon's swarming or self-hiving arrangement, were each commended.

Messrs. W. Broughton Carr, J. M. Hooker, and F. J. Cribb officiated as judges, and the following is the

LIST OF AWARDS (APPLIANCES).

Collection of Hives and Appliances.—1st, W. P. Meadows, Syston, Leicester; 2nd, C. Redshaw, South Wigston, Leicester.

Observatory Hive.—1st, T. B. Blow, Welwyn, Herts; 2nd, W. Dixon, Becket-street, Leeds; highly commended, C. Redshaw.

Frame Hive for General Use—1st, W. P. Meadows; 2nd, C. Redshaw; 3rd, C. Redshaw.

Frame Hive for Cottager's Use.—1st, W. P. Meadows; 2nd, C. Redshaw; 3rd, C. Redshaw.

Honey Extractor.—1st, W. P. Meadows; 2nd, W. P. Meadows; highly commended, W. P. Meadows.

Pair of Section Racks.—1st, C. Redshaw; 2nd, W. Dixon; 3rd, W. P. Meadows.

Rapid Feeder.—1st, W. P. Meadows; 2nd, C. Redshaw.

Bingham Smoker, of British Manufacture.—1st, W. P. Meadows; 2nd, W. Dixon.

Useful Invention introduced since 1892.—Bronze medal, W. P. Meadows, for improved super clearer; highly commended, J. Walton, for slow bottom feeder.

Bee Culture Exhibit.—Bronze medal, H. W. Brice, for method of queen raising; certificates, C. N. White, for honey samples, and T. B. Blow, for honey vessels in glass and pottery; commended, W. Dixon, for swarming arrangement, and H. Seamark, for cottager's combination hive.

The Honey Classes will be dealt with next week.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

"RE-QUEENING AND BUYING QUEENS."

[2002.] I observe in your issue of the 21st ult. a letter on this subject (1889, p. 245) signed "P. S.," that he, after making about as big a hash of his bees as was possible, has come to the determination to "let well alone" in future. I am afraid this is one case among many of our young bee-keepers who, in their commendable desire to do the best they can for the prosperity of their bees, undertake delicate operations without sufficient elementary training. I have no desire to criticise his letter, except in the most friendly way, and with every desire to help him, but from his own statements I must say he has, in my opinion, deliberately laid himself open to be imposed upon. This is not an isolated case, as I had a similar one under my observation only last year, where high prices were paid for queens which turned out not as represented, but "otherwise." As to the sums of 8s. 6d. and 7s. 6d. being paid for home-bred queens, well, there is an adage about some people and their money being soon parted, although I do not assume "P. S." to be one of these, still the price is far more than such queens are worth. I consider that hybrid queens of the current year—which are to my mind far superior to pure-bred ones—are not worth more than 3s. 6d. each in the autumn, when "P. S." purchased, and earlier in the year 5s. 6d. Although, if a stock has to be broken up in winter or early spring for the purpose of supplying queens, then the latter is worth the value of the stock; and the value of queens of the previous year is not more than 2s. 6d. It is in no way certain, however, that a current year's queen will be superior to one a year older. I have one in my mind now in her third summer which can give points and a beating to any other two queens I have yet come across young or old, and I do not consider her saleable value to be more than 2s. 6d., though I should sing "She is all the world to me"; but, of course, even a queen like this would afford no excuse for *well-known* dealers (as "P. S." puts it) practising deception on beginners by passing them off as the current year's productions. With ordinary care no queen-rearer need ever make a mistake in the age of his queens; and we cannot too strongly condemn the palming off of

goods, be they queens, honey, or anything else, as other than what they are; it is neither more nor less than a fraud. *Glowing descriptions of goods for sale* is a bait which I am very shy at even nibbling at, much less swallowing whole.

Another point I should like to say a word upon, and that is, how was the "expert" referred to enabled to declare that the queen was "*not less* than three years old"? Young queens, especially in large colonies, soon lose their bloom (the hairy pubescence), and in one short year a queen that has done good work might certainly be stated to be an adult or even "old one," as our editor very properly put it, and, as I read you to mean, *evidently not a young one.* I have known queens at six months to look old, ragged, and worn out by being kept breeding at high pressure, and might be easily judged to be "getting on for forty," but I cannot for the life of me make out how the expert mentioned can declare any individual queen without having her pedigree to be "not less than three years old."

Now, reverting to your correspondent's own practices, as shown by his letter, in removing No. 1 to introduce the new queen, I would like to ask did he destroy No. 1? and if so, did he do well to be "off with the old love" before he got the new one accepted? Again—with the first queen he bought for No. 2—how did that queen, though "old," come to be dead so soon? and is it not a strange coincidence that the second queen for No. 2 should also be gathered to its foremothers in eighteen days! Still stranger is the sequel to this story when we find that the third queen bought for No. 2 is a "wrong 'un." But a ray of light is given us by "P.S." at the end of his letter, when he says: "At last I examined them thoroughly." Yes, friend "P. S.," it is this last little word which, in my opinion, is the answer to your plaintive cry, thoroughness and the doing of things thoroughly is what is wanting not only in bee-keeping but on every hand. We bee-keepers are not as a body so painstaking as we should be; the rush and bustle of every-day life is against our taking proper pains, and if we examine our hives and carry on our bee-keeping in the same hasty manner with which most of us eat our breakfast and rush off to catch a train, so surely shall we fail to be successful in delicate manipulations such as handling queens, &c. It is our fault in not seeing the cause of our failures at our own doors, when we cast around us for the first object we can find and lay the blame thereon accordingly, moralise, and then make a firm resolve in future to "let well alone," and go from bad to worse.

Now, to show your correspondent that I raise a "plaintive cry" myself occasionally, I desire to say that I too have a grievance, and that is the season of 1894. Bees did well in April, especially those in "Wells" hives. May was bad, very bad, and up to Friday, June 22, *all stocks in single-queen hives* had to be fed to prevent starvation, but with those in hives worked on Mr. Wells' system the bees had sufficient surplus to more than bring them through the late trying season. On the last-mentioned date came a welcome change, and for two or three days it seemed as though the surplus chambers would rapidly fill, but to-day, July 1, another change has come; the ruthless scythe has laid low the whole of the clover, and, with a rich harvest at hand seven days ago, the cup of sweetness has now for a time been dashed from the lips of my little workers. They don't like it, neither does your humble servant.

I also notice in the columns of your excellent journal reference is made to bees raising queens from the egg. But I say they do not do so. In fact, they do not seem to take any notice of the egg until it is hatched. This I have proved often and recently. Many of your readers have no doubt kept fowls, and have observed how a sitting hen at different times shifts the position of the eggs upon which she is sitting; those who have raised chickens by incubation also know the absolute necessity for turning the eggs every twelve hours; the reasons for this being, first, to supply the top warmth to all sides of the egg equally; second, to aërate the eggs from different sides which is necessary for the well-being of the embryo; and, third, to prevent the embryo from becoming fixed to the side of the egg, by being too long in one position, for the embryo always floats on the top of the fluid (the yolk or vitellus) within the shell. And so it is with the egg of the bee, but instead of the queen visiting the cells to turn the eggs, this is done by the workers, and thus gives them yet another office of usefulness, which to the present I do not think they have been accredited with. To prove my point let me say on May 30 last I had four eggs laid in adjacent cells which I marked; these eggs were in a perpendicular or vertical position in the cells, with the curvature of the eggs to the left; on May 31 they were all inclined to an angle of forty to the right, and the eggs had been turned over, as the curvature of the eggs were reversed. Then on June 1 these eggs were all in a horizontal position and the curvature of the eggs was reversed, also being now upwards; the next day they were hatched, and since then I have seen the nurse bees every time I go to a hive, which is every day (weather permitting), busy dipping their heads into cells containing eggs. This has made quite clear to my mind that which before had puzzled me, viz, why they went to so many cells for *nothing.* Now we have got to the stage when the egg hatches, and even in queenless colonies it is not for thirty-six hours that the newly hatched larvæ is fed at all, I confess to having found a few larvæ fed at twenty-four hours, but very few; and even in colonies in the condition above-mentioned, I have failed to find royal food given to larvæ until between the second to fourth day; so I do not see how it can be

said that queens are, under ordinary circumstances, *raised from the eggs*, when it is well known that in 999 out of 1,000 cases they are raised from larvæ over forty-eight hours old—in most cases, much older ; in fact, so old that the resultant majesty is only half a queen and half a worker. Let bee-keepers think of this ; it is no fancy picture, but a solid truth, and then they will cease to wonder why queens for which high prices have been paid are worn out before their time, and appear older than they should, and so even deceive the judgment of the most expert.—HENRY W. BRICE, erstwhile "THE HEATHEN," *Thornton Heath, July* 1.

PUTTING SWARMS TOGETHER.

[2003.] In your valuable "Hints" last week (p. 251) you seem to suppose that your readers will usually know the hive from which a swarm issues. With a large number of hives and two or three "bee settlements" in our house, we can by no means always tell from what hive a swarm has come. The plan which has been adopted this year with its endless swarms seems a great success, and some of your readers may like to try it. We keep a swarm in a skep until one or two more are out, then at eventide we make up a hive with seven or eight frames and three racks of shallow frames or sections ; we syrup the bees in each skep, throw them on to the cloth placed on a board in front of the hive, syrup them again (taking care to sprinkle or spray them only), and thus build up an enormous stock, which unites without any fighting or further trouble. One stock not ten days old, made up in this way, appears already to have amassed 30 to 50 lb. weight of super honey.—E. BARTRUM, D.D., *Wake's Colne Rectory, Essex, June* 29, 1894.

STARTING BEE SHOWS.

[2004.] I trust you will give me a little space to say the editor of the *South-West Suffolk Echo*, Mr. Ronald Smith, of Haverhill, is taking much interest in the poultry and bee departments of the Wickhambrook (Foal and Colt) Show, at Great Thurlow, July 19, 1894. These departments of the show are entirely new departures, and it is to be hoped they will command the success which the energy of the committee deserves to achieve.

Mr. Owen Dowsett, Great Thurlow, is the secretary for bee and honey classes. Mr. C. Whiting will lecture and give demonstrations in modern bee-keeping. The competition is limited to a twelve-mile radius, and bee-keepers eligible to compete should do all they can to back the committee in their efforts. It is a discouraging season for bee-keepers, and therefore there is the greater necessity that every bee-keeper in the districts round Great Thurlow should apply for schedule and stage some honey in one or more of the five classes. There is also a class for mead, and another for home-made hives, with good prizes. I suggest another excellent class for general adoption another year—*i.e.*, honey vinegar. It is easily and cheaply made. Proportions are one part of honey to four parts of pure water. Cover the crock with fine gauze, and expose the open vessel to the sun for six weeks. No bee-keeper will use any other vinegar when once he has tried this deliciously wholesome product. It needs clarifying by filtering properly. Real honey vinegar only needs to be known to command a ready sale.—E. D. T., *Eynsford, June* 30.

"HONOUR TO WHOM HONOUR IS DUE."

[2005.] When at the Cambridge Show I spent some little time in the tent of the B.B.K.A. with the object of seeing what was new and which of the appliance manufacturers had been successful in the various classes. I noticed on every exhibit that had obtained a prize the catalogue of a well-known manufacturer. I thought to myself what a fortunate man this is to have carried off so many prizes. Judge of my surprise when I found, upon looking at the official catalogue, that *not one* of the prize articles had been exhibited by the individual who had the audacity to cause his own business catalogue to be placed upon them, who, by so doing, was trying to mislead the public and endeavouring to benefit by the honours gained by other manufacturers.

Upon calling the attention of the secretary to the fact, he said he had already spoken to this person of his unfair way of advertising, and had twice removed the catalogues from articles *not* belonging to him. Those who are capable of such dishonest practices should be made an example of, and not be allowed to compete in future exhibitions of the B.B.K.A. —A LOVER OF FAIR PLAY.

"WELLS" HIVES.

DO THEY CONTAIN ONE OR TWO STOCKS OF BEES?

[2006.] Referring to the letters (1897 and 8) in your issue of June 28, I feel that no good purpose can be served by prolonging the present controversy concerning the double-queen system, and therefore content myself by saying I have nothing to withdraw from what I have previously written, although I might add much. I think enough has been said to enable bee-keepers to form their own opinions, and I am quite content to leave the matter in their hands, for after all it does not make one iota of difference by whatever name the system is known, or whether a "Wells'" hive is to be counted as one stock or ten stocks, it will not alter the plain facts of the system. In repeating that I have nothing whatever to gain by it, it is certainly far from my wish to cram the system down the throats of bee-keepers. At the same time I feel greatly indebted to those who have given their time in writing for the

benefit of others those things which they have proved to be good for themselves, and I hope the numerous friends who are fast swelling the ranks of bee-keepers will continue to do the same. I shall be very pleased to answer any questions through your columns or otherwise which may be put to me upon the subject, but beyond that I feel there is no need for me to go any further at the present.—G. WELLS, *Aylesford, Kent, June* 30.

IMPERFECT COMBS.

[2007.] Where whole sheets of foundation are not used in the frame in a hive it frequently happens that a large quantity of drone comb is built; if this is cut out it is usually built again and again. The only sure way of remedying this is to insert pieces of worker comb in the place of that cut out. Frames of comb so treated often have an ugly look where they are made to join by the bees. A simple way to do this satisfactorily is as follows:—Take a tin pastry cutter, or any tin box or preserved fruit can, as near the size of the portion of the comb to be cut out, and press the sharp edge into and through the objectionable part of the comb, which must be first placed on a board firmly. Remove the comb from the tin, and then cut a piece of spare worker comb with the same cutter. This will be found to exactly fill the place of that removed from the frame. The bottom must be unsoldered from any tin proposed to be used should it have one, or there will be difficulty in removing the comb without damage.—JOHN M. HOOKER, *June* 30.

THE SEASON IN ESSEX.

We have been requested to reprint the following cutting:—

"One of our representatives had an interesting chat with Mr. W. Debnam, of Chelmsford, the expert of the Essex B.K.A. Within his long and varied experience he never remembers a year which has been more prolific of swarms. Mr. Debnam has already taken from his own stock 50 lb. of this season's honey (in sections), and twice that quantity for Mr. Reginald Christy, of Boyton Hall, near Chelmsford—these being *inter alia*. Since his visits in the spring, Mr. Debnam has heard from all parts of the county of the numerous 'flittings' that have taken place, and he has been busy going hither and thither to see what has been going on, and to offer counsel where needed. Amongst others may be mentioned Mrs. Cobb, of Great Waltham, whose seven hives have increased to twenty-one, all in sound, healthy condition, making honey fast. Mr. Ellis, of High-street, Witham, has had five capital swarms from one hive within about a month. At Mrs. Taylor-Lowe's, Gosfield Hall, Halstead, where the head-gardener, Mr. Morgan, has charge of the apiary, the original hives have nearly trebled, and now number between thirty and forty. Another instance is that of Mr. Coe, blacksmith, of Bannister Green, Felstead, a prominent bee-keeper, whose garden is practically full of hives, over thirty having resulted from ten. Mr. E. Jex, of Springfield, has also had several excellent swarms. It appears as if it were not so much a question of 'to be' as to be without bees, for their marvellous fecundity and methods of seeking fresh fields and pastures new have put the Essex keepers to such stress in the matter of hives that recourse has even been had to rabbit-hutches. It is satisfactory to learn that the number of apiaries, owing to the intelligent activity of the County Association, assisted by the Technical Instruction Committee, is steadily increasing, and with appreciable profit to those who resolutely determine to become bee-masters, not haphazardly, but with an eye to business as well as pleasure."—*East Anglian Daily Times.*

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of May, 1894, was £2,173.—*From a return furnished by the Statistical Office, H.M. Customs.*

Queries and Replies.

[1087.] *A Beginner's Queries.*—I commenced bee-keeping this year by purchasing a stock five weeks ago, the bees in which seem to be vicious. 1. How should I use the smoker in order to subdue them? 2. Having found stock rather strong (covering ten frames) I put a super on, but, as there was not much honey to be gathered, I put the feeder on top of the super. If bees are scarce of food will they go up and take the syrup? 3. I saw the bees carry some white substance from the hive and dropped it some distance away. What is that? 4. I send you some bees from my hive. Can you say what race they are? Judging by the *Guide Book* they seems to be Italians, but so vicious?—E. J. BARTON, *Anerley.*

REPLY.—1. It would be a simple matter to *show* you how to use the smoker, but since you have the *Guide Book*, in which a half-dozen or more pages are devoted to the description of how to subdue and handle bees, it is not easy to see that anything can be added. 2. Bees should never be fed with syrup while supers are on. They will store it in the combs. 3. Probably a larva or grub which had died in the cell. 4. Bees are hybrid carniolans, and have no trace of the ligurian about them.

[1088.] *Moulding Wax.*—1. I have a mould made of metal, in the bottom of which certain letters, nearly 1-16 in. in depth and breadth, are engraved. I propose running wax into it, but am afraid the wax may stick in the letters.

How can this be prevented? 2. Some wax rendered from old combs only has no smell to it. Can the scent be imparted by melting this wax with honey, or otherwise?—T. B., *Middlesex, June* 29.

REPLY.—1. The usual course is to dip the moulds in warm water just before running the wax in. 2. More or less of the scent of honey may be imparted to the wax if a little honey of good aroma is mixed with it.

[1089.] *Ownership of Swarms.*—I had a swarm of bees from one of my hives on June 21, about 9 a.m. I hived them in a straw skep, and about 2.30 they left the skep, flew off, and went into an empty hive belonging to a neighbouring bee-keeper who lives about a quarter of a mile away. I have a witness who saw them go in. I went down and saw the owner of the hive referred to, and she declared that her own bees had swarmed that same morning, and went into the same hive, and that mine followed them in the afternoon, and she refused to let me have the bees unless I gave her 10s., which I did. To-day (June 23) another swarm has issued from the same hive, which, according to her statement, swarmed two days before, and to which mine was supposed to have joined. She has only that one stock, and the swarm which came from it on the 25th weighed five or six pounds. I ask you:—1. Is it possible for a second swarm to come off four days after the issue of the first one? And 2. Can I compel my neighbour to return my 10s. as asked, and which she refused to?—T. F.

REPLY.—1. There is strong evidence to a practical bee-keeper that only your bees entered the hive on the 21st, and that your neighbour's bees did not swarm at all on that day; but whether there is legal evidence or not is another question. 2. As the case would have to go before a County-court judge, we could not venture to say how he would decide the point.

[1090.] *Transferring Stocks in Skeps to "Wells" Hives.*—I started bee-keeping last year by the purchase of a single skep of bees in April. I had two swarms from it. The first I put into a frame hive, and the second into another skep. All three stocks wintered well, the frame-hive being especially strong. This year I have transferred the two skeps to a "Wells" hive, not by cutting out the combs as usually advised, but by placing the skeps above the frames in the "Wells," and allowing the bees to work down into the lower part. So far as I can judge, the operation has been successful. The first skep was put on eleven days ago, and the second five days later. 1. What I want to know is, when should I take the skeps off? Shall I remove them twenty-one days after putting them on—that is, after all the brood is hatched out above—so as to enable me to get a few sections filled in August from the heather, which is abundant in this neighbourhood? Or (2) shall I keep the skeps on till the end of the honey season, and allow the bees to fill the skeps with surplus honey? The clover is just coming into bloom now, and the weather is all that can be desired. We are much later here than up south; but it is to the heather we look for our main crop.—JOHN MCINNES, *Thropton, Rothbury, June* 30.

REPLY.—1. It is far from safe to assume that the queen and bees will have taken possession of the lower hive immediately, so that without examination you cannot say when all the brood will be hatched out from the skeps. If, however, it is made clear that the queens have descended, and are laying in the lower hive, a sheet of excluder may be placed above the frames to keep them below. That done, the skeps may be removed when clear of brood, and by allowing both lots to work in a common super some sections may be secured at the heather, if weather keeps fine. 2. By leaving the skeps to become chambers for surplus storing, a *safer* result may be counted on, but on the other hand it is very disadvantageous to have heather honey stored in old brood-combs, such as the skeps would contain.

[1091.] *Bees Dying.*—I enclose piece of comb and would feel obliged if you would say in next journal whether it is tainted with foul brood or not. I have taken it from a stock which has, since the month of April, thrown out a very great number of dead bees, and something like a civil war goes on every day on the alighting board, and a lot of bees crawling on the ground. It had only two patches of brood in April, though now it has five combs of brood. It is just behaving in the very same way as mentioned on page 258, query 1086. There are a great number of young bees, but some of the sealed brood has a decidedly yellow tinge, though no foul smell. Your kind attention will greatly oblige,—A VERY OLD SUBSCRIBER, *Wigtown, June* 29.

REPLY.—There is certainly no sign of brood failing to hatch in comb received, as is shown by the fact that young bees sufficiently matured have hatched and are hatching daily since comb was despatched to us. We think it very probable the stock will be all right in a few days, or when natural food is plentiful, and the bees can get abroad daily. In any case there is no need for alarm as to foul brood in the stock referred to.

Echoes from the Hives.

Lancaster, June 29.—Splendid bee weather has come at last, and honey is rolling in. The smell of it can be felt some yards away from my hives.—W. DRINKALL.

Bee Shows to Come.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances. Liberal prizes. S. Upton, secretary, Lincoln.

July 20 and 21.—Bristol District B.K.A. at Knowle. Schedules from Messrs. J. Brown and E. A. S. Cotterell, 42, Baldwin Street, Bristol.

July 21. — Wotton-under-Edge, B.K.A. Show of honey, &c., in the Fete Ground. Entries close July 14. Hon. Sec., G. Gunston, Wotton-under-Edge.

July 26.—Notts B.K.A. Annual County Show at Southwell. Liberal prizes. Open classes for appliances, hives, and extracted honey. Entries close July 19. Secretary, A. G. Pugh, Mona-street, Beeston, Notts. Other shows connected with the Notts B.K.A. will be held as follows :—Lowdham, July 19 ; Hucknall Torkard, July 24 ; Beeston, August 6 ; and Moorgreen, September 4.

July 27.—North Norfolk Bee-keepers' Association. Great show of honey at Melton Constable Park. Liberal prizes. Entries close July 18. Schedules from C. J. Cooke, Edgefield, Melton Constable.

August 1, 2, and 3 —At Beverley, Yorks. Prizes for bees, honey, and appliances. Marshall Stephenson, secretary, York.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules, W. Wilson, Acrehead, Dumfries.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

Shows have been arranged in connection with the Lincolnshire Bee-keepers' Association as follows :—July 7, Winterton ; 10th, Scotter ; 17th, Brant Broughton ; 24th, Heckington ; 26th, Wragby, Waltham, and Swinderby ; 31st, Morton (Bourne) ; August 1st, Blankney and East Stockwith ; 2nd, Stickney ; 6th, Eltham ; 9th, Wainfleet ; 16th, Mablethorpe.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

H. R. Marsh (Somerset). — *Driving Bees from Skep after Swarming.* — The proper time for driving under the conditions named is twenty-one days after the issue of the first (or top) swarm. By that time all brood left in the hive will be hatched out. If several weeks has elapsed since the first swarm came off the young queen will probably be laying. As to "tying the old combs into the frames of the new hive," we should not advise it, but rather have new combs built instead. It is not likely that the driven bees will be able to do anything in yielding surplus in sections, or otherwise ; the season is too far advanced for that.

W. (North Wales). — Nymph is that of a queen.

G. H. Strong (Strawberry-hill). — If the outside sections are so nearly filled as stated, a second rack should certainly be added below without delay, providing that the flora of your district still continues to yield well, but not otherwise, if the object is to get all well sealed and finished. Fine weather alone will not enable bees to gather nectar, there must be flowers to gather from or very little surplus will be stored, consequently we cannot give a date when you "may cease to expect any more honey in sections"

C. Marks (Kingsbridge).—*Bees Hanging Out.* —The bees evidently require ventilation, and should have the hive raised in front or all round, if convenient. It will do no good brushing the hanging-out cluster away, the bees will only return to the same spot. If you give room and air, they will work instead of hanging out.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence ; for every additional Three words or under, One Penny.

STRONG Stocks of BEES, in Standard Bar-frame Hives, 33s. carriage paid. Also a few young laying QUEENS, 3s. 6d. post free. William H. Bulcock, Riversdale House, Clitheroe. E 37

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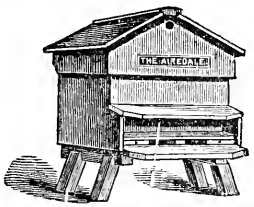

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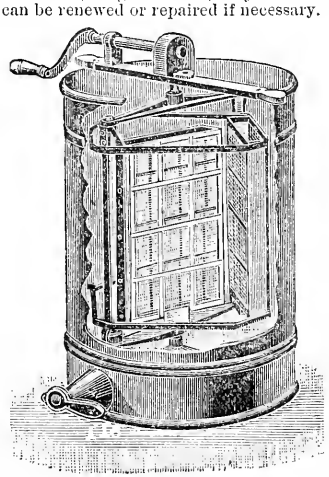

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Editorial, Notices, &c.

MEETING OF BEE-KEEPERS

AT THE "ROYAL" SHOW, CAMBRIDGE.

As notified on p. 232 of our issue for June 14, a meeting of bee-keepers was arranged to be held in the show-yard at Cambridge on Wednesday, the 27th ult. The meeting was convened by the Committee of the British Bee-keepers' Association, mainly because the visit of the Royal Agricultural Society was considered an opportune occasion for making an effort towards the resuscitation of the Cambs. Bee-keepers' Association, which from some cause has dropped out of existence.

It is well known that the county is one of the best in the kingdom for honey production; most persons would therefore have supposed that an effort in the direction referred to would meet with the hearty co-operation of those who were officially connected with the now defunct association, and the proffered help of the "British" welcomed and furthered in every possible way. Such, however, was not the case, so far as the action of one gentleman was concerned, and for some reason quite beyond ordinary ken the idea was viewed in a spirit so hostile by Mr. C. N. White, who was a prominent official in the late Cambs. Association, as to be entirely incomprehensible to any one but himself.

The meeting was fixed for three o'clock in the Council Tent of the R.A.S., a good number of bee-keepers being present. The Chairman of the B.B.K.A., Mr. T. W. Cowan, presided, and was supported by Mr. H. Jonas, Vice-Chairman, and several members of the committee; Monsieur Ed. Bertrand, Editor of the *Revue Internationale d'Apiculture*, also occupying a seat on the platform. After a few observations by Mr. Sworder on his experience in connection with the Bishop's Stortford Association, and Mr. J. P. Sambels on the work of imparting technical instruction in bee-keeping under the auspices of County Councils. Mr. C. N. White rose and began a speech which, so far as its general import could be gathered, was intended as an attack on the committee of the B.B.K.A., for not, in his opinion, doing sufficient for the encouragement of bee-keeping among cottagers. Mr. White's remarks were, perforce, cut short by the time for which the use of the tent had been granted having expired, and this necessitated an adjournment of the meeting till later in the afternoon.

On resuming, the Chairman again called on Mr. White, and that gentleman continued much in the same strain as before. The purport and object of Mr. White's remarks may have been clear to himself, though we—along with all who have expressed an opinion on the subject—entirely fail to see the slightest justification for what was said, or what good purpose could be served by saying it. A complaint was made of some supposed discourteous treatment of the secretary of the late Cambs. Association by the committee of the "British," which, upon the chairman asking Mr. White for an explanation, was admitted by the latter gentleman to be a mistake on his part, and had reference to the Cambs. Association only. Another grievance against the central body was the exclusion of cottagers from representation on the committee—a charge not only unfounded but absurd on the face of it. We should like to know what cottager bee-keeper could, or would, afford the time and expense of attending the monthly meetings of the committee, which must of necessity be held in London?

On the conclusion of Mr. White's remarks, Mr. Bevan strongly protested against the accusations made against the Committee of the B.B.K.A. and its President, the Baroness Burdett-Coutts, who had, the speaker said, to his own knowledge, spared no pains or expense in promoting bee-keeping among cottagers.

The Chairman also protested against the accusations, as being entirely without foundation, and pointed out that the Committee had continuously laboured in the interest of cottagers.

After some further discussion, the Chairman announced that Mr. Chas. Kent, formerly Secretary of the Cornwall Association, was willing to act as Hon. Sec. *pro tem.* if anything could be decided upon as to restarting the Cambs. B.K.A., and eventually the names of about a dozen gentlemen willing to co-operate were handed to the Chairman.

The proceedings then terminated, not quite without results, in spite of the hostility we so much regre ted, from the quarter where it was least expected. There are plenty of persons desirous of taking up bee-keeping in Cambridgeshire. The county is, as we have said, a good one for honey, and with the Organising Secretary of the County Council himself taking a kindly interesting in bee-keeping, it only needs combination on the part of a few gentlemen having sufficient public spirit to place the good of the many before personal interests of any kind, in order to see real progress to bee-keeping in Cambridgeshire.

THE "ROYAL" SHOW AT CAMBRIDGE.

(*Concluded from page* 264.)

THE HONEY EXHIBITS.

Of the honey classes it may be said that, while creditable for the season and under the circumstances, they were not of such general excellence as will probaby be staged at later shows. The "Royal" will always be more or less heavily handicapped by the early date on which the show takes place, seeing that the best of the season's honey has hardly a fair chance to ripen fully by the time the show opens. Bearing this in mind, the prize samples of extracted honey of the current

year were very good indeed. The class for granulated honey was also a most excellent one, showing fine keeping qualities and extra good flavour among those lots which had awards. The class for collections of honey were, perforce, made up almost entirely of last year's produce. The 1st prize collection was, however, a good one, and tastefully displayed, and the others which received awards were also good; but several well-known exhibitors were conspicuous by their absence here, as they were in some other classes—solely through the season—in occupying positions in the awards not usual with them. The following are the

AWARDS FOR HONEY.

Twelve 1 *lb. Sections of* 1894 *Honey.*—1st, W. H. Woods, Hemingford Grey, St. Ives; 2nd, W. Woodley, Beedon, Newbury, Berks; 3rd, J. Blyth Clarke, Braughing, Herts.

Six 1 *lb. Sections of* 1894 *Honey.*—1st, W. Woodley; 2nd, Miss M. L. Gayton, Much Hadham, Herts; 3rd, W. H. Woods.

Twelve 1 *lb. Jars Extracted Honey of* 1894.—1st, E. B. Cooper, Leicester; 2nd, Rev. R. S. Routh, Langstock Vicarage, Stockbridge; 3rd, B. G. Brocklehurst, Brocklehurst House, Ludlow; highly commended, E. C. R. White and W. Woodley.

Twelve 1 *lb. Sections of any Year.*—1st, W. Woodley; equal 2nd, E. C. R White, Woodford Mills, Salisbury, and J. Walton, Weston, Leamington; 3rd, W. Dixon; highly commended, Rev. G. C. Bancks, Dartford, and T. H. Jackson, Kirby Moorside, York.

Three Shallow Frames of 1894 *Comb Honey.*—1st, George Wells, Aylesford, Kent; 2nd, G. E. Fancourt, Stamford; 3rd, C. R. Pigott, Landebach, Cambs.

Twelve 1 *lb. Jars of Extracted Honey, any Year.*—1st, T. B. Widdowson, Leicester; 2nd, W. Dixon; 3rd, W. Woodley; highly commended, Capt. Ord, Bury St. Edmund's, Lieut. H. C. Hawker, Longparish, and H. Wood, Paradise, Lichfield.

Twelve 1 *lb. Jars Granulated Honey.*—1st, S. J. Cooper; 2nd, Lieut. H. C. Hawker; 3rd, E. Oakes, Broseley, Salop.

Display of Honey in any Form.—1st, W. P. Meadows; 2nd, W. H. Woods; 3rd, G. E. Fancourt.

SHOW AT FARNINGHAM.

An exhibition of honey and bee products was held in connection with Annual Rose Show at Farningham, Kent, on the 3rd inst.

Making allowance for our two sunless and honeyless months of May and June, and for the fact that the competition was limited to members of the Rose Society and cottagers, the exhibits were all that could be expected, and better than many anticipated.

Mr. J. M. Hooker, who undertook the task of judging, made the following awards:—

Twelve 1-*lb. Sections.*—1st, Rev. G. W. Bancks; 2nd, E. D. Till; 3rd, Miss Smith.

Shallow Frame of Honey for Extracting.—1st, E. D. Till; 2nd, Rev. G. W. Bancks.

Twelve 1-*lb. Jars Extracted Honey.*—1st and 2nd, Rev. G. W. Bancks.

Cottagers' Prize.—1st, R. Wheeler.

Collection of Honey.—Special prize, E. Longhurst.

Mr. and Mrs. Bancks obtained a V.H.C. for a splendid collection of preserved bee flowers and paintings of bee flowers by Mrs. Bancks. The name and relative values as a honey and pollen producer were on each specimen, making it an instructive as well as an attractive exhibit—had there been a class for preserved and painted flowers these would have certainly gained a prize.

Samples of Kent honey in Lilliputian screw caps, with the Kent label attached, were distributed, or, rather, sold, by the K.B.K.A. Home-made honey vinegar and mead shown by Mr. Bancks were freely sampled. The stronger demand was on the latter, of course, but home-made honey vinegar attracted a good deal of notice, and ought to become a feature in honey shows. Mr. Bancks's samples were made from one part honey to four of water—just double the strength of the honey vinegar usually made by Continental bee-keepers. So wholesome a product, so easy to make, and so economical, ought to become common in every bee-keeper's home. As you increase the proportion of honey the vinegar partakes of the character of an acid beverage most agreeable when diluted as a summer drink.

The bee-keepers at Farningham had the great privilege of meeting Monsieur and Madame Bertrand and Mr. Cowan there. Monsieur Bertrand came with the object of inspecting some Kentish apiaries. His name is well known to all readers of bee literature as the leading and most prominent bee-keeper in Switzerland. Like the celebrated Huber, he is a Genevese, and resides on the banks of the Lake of Geneva. Monsieur Bertrand was delighted with the floral exhibits, but the honey section of the show claimed him most. Honey ought to be, as far as possible, a prominent feature in every flower show. Honey, after all, is a "refinement" on the flowers, for is it not a veritable "Extrait de Fleurs"?—(*Communicated.*)

HELPING HONEY SHOWS.

AN INVITATION TO EXHIBITORS OF HONEY.

We invite attention to the show of honey which takes place at Bolton, Lancs, on the 26th inst. In doing so, we go a little out of our usual course, because the instances are not too numerous in which the executive of Agricultural Societies evince so great an interest in bee-keeping as to themselves take the initiative, devote a department to it, and offer liberal prizes for honey. This is, however, the case with the Royal Lancashire Agricultural Society, and we trust their encouragement of our pursuit will be appreciated by

bee-keepers as it should be, viz., by sending an exhibit or two ; entries for which will be received up to Saturday next, the 14th inst.

Bee shows, as a rule, are dependent for much of their success on the direct help afforded by the various county associations, and where that assistance is not enlisted there may chance to be a lack of support which would otherwise be forthcoming. This is, we believe, the case with the show referred to, and we much regret to hear that the liberality of the Society has not met with the response hoped for in offering good prizes for honey. But it is not yet too late, though nearly so, for those who have honey on hand to write at once for a schedule. This is our reason for specially drawing the attention of readers to the show in question. For particulars see "Shows to Come" on another page.

THE BEE TENT AT CHINGFORD.

Mr. S. J. Baldwin, the well-known bee expert of Bromley, has been engaged by the local Technical Instruction Committee to lecture on bee-keeping at Chingford at Saturday afternoon, July 21 next, in Mr. J. B. Riding's nursery-ground. The bee tent belonging to the Essex County Council will be used for the occasion, and as far as possible practical instruction will be given in the use of modern appliances, and in manipulating bees. Admission is free, and as the Chingford Flower Show will be held on the same afternoon in the Parish-room opposite, there should be a good attendance.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[2008.] We have had a fortnight of fine weather, and the busy bee has improved the shining hours. Hives on the verge of starvation on the longest day are now heavy with abundant stores, not only in the brood-nest for future wants of the colony, but also in the supering compartments to cheer the heart of the bee-keeper in the future when he or she will be marketing their harvest. There has been a good few swarms in this locality, and a few maiden swarms from those early swarms that did not succumb to the untoward weather of May and June.

I am glad to see our friend Mr. Brice ("The Heathen"). 2002, p. 264, has answered the grumble of a queen buyer of the previous week, therefore I cannot advance the matter by anything I can say ; yet I would like to add that I have heard "experts" give very decided opinions on subjects which are as yet beyond the ken of practical hands, and the age of queens, judged by appearance, has been one of them. Possibly the queen was sent in a small box, with a portion of "Goode" candy fixed in one corner (that is my own way of packing, when sending queens off). The queen may get some of the food on her body by the many "jars" she and her attendants get when in the mail-bags, and the subsequent cleaning up may give the old worn-out appearance, and account for the "expert's" conclusion, so quickly arrived at, that she was, as the little boy told his father on seeing the new arrival in the family, (sans teeth, sans hair). "Oh, pa, you have been 'had.' She's an old 'un!"

I have sent off a good few swarms this season, every one of which has reached their destination in good condition, and many testimonies have been returned on certain points, some on my method of packing, some on the gentleness of the bees, some on the fine queens. Now on the matter of queens and their age I would like to say that one of my best stocks this season has not swarmed. It is headed with a late '92 queen. Last year the colony did practically nothing, and I made up my mind to supersede her, and had a fine queen of '93 ready to do so, but a pressing request came from a bee-keeper to send him a queen per return and I parted with her, and as my spare queens on hand were limited, and I hoped to get a few lots of driven bees to build up into stocks. I wanted to hold a few of my own young queens to place at the head of the colonies, so I thought I would give her another chance, and this year they have just boomed without swarming, and are filling up the supers in good style. This queen last season was not noted for size, but this year she has wonderfully improved in size, in fact is quite matronly, if I may use the term. The above is not in the interest of dealers in queens, but it is a fact, nevertheless, and I have no doubt that other bee-keepers have had similar experiences. The season now drawing to a close has been a swarming one in some parts. How have the mechanical devices to catch the swarms come out on trial? Perhaps those who have given them a trial will report for the benefit of the craft.

I notice one of our editors has had some trouble in having bottom bars of shallow frames square and narrow instead of flat, and with wider combs we shall require wider frames all round. Who among our readers can supply the information by actual test? Now with combs 1½ in. thick I consider our frames should be 1 in. wide all round, with bottom bar same width as ends, and at least ¼ in.

thick. This would remove one of the principal causes of carrying the combs down below the frames, and joining them to the combs in the box under the top one.

The idea a few years back, when the Combination hive first came into use, was that we should, by having an extended brood-nest, have a larger and stronger colony, and reap an increased harvest of honey, but results have not proved the correctness of the theory, and instead of increasing our brood-nest by giving extra frames to the number of twelve or fourteen, we rather confine, or in some cases contract, the brood-nest to nine, or at most ten, frames for the honey harvest, and thereby increase our output. I was told by a bee-keeper the other day that he, by the advice of a good bee-keeper, had increased his brood-nests by extra frames this year. Although he had supered, and the weather was good, with clover and limes in bloom, his bees had not taken to the sections, and he was afraid he should not get any sections filled. My advice was to contract the brood-nest to eight or nine frames at most, and force the bees into the supers. This tried on half his hives would prove the matter as between my practice and the other good bee-keeper's theory. — W. Woodley, *Beedon, Newbury.*

"RE-QUEENING AND BUYING QUEENS."

[2009.] In reply to Mr. H. W. Brice's letter (2,002, p. 264) I wish to thank him for his friendly criticism of mine on p. 245 on the above subject. I regret having made such a "hash of my bees" as Mr. Brice says I have, but I distinctly said in my letter that I should "let well alone . . . . *as regards buying queens,*" so that I hope not to be an instance of the old adage quoted by Mr. Brice. Thanks to Mr. Brice I now know that 7s. 6d. is too much to give for home-bred queens. Though my case was not a parallel to the one quoted, as it was not the high-priced queens I found any fault with, only the cheap ones. To answer Mr. Brice's questions: I did not destroy the old queen of No. 1 until I had made certain that the introduction of the other had been safely effected. The first queen bought for No. 2 died of starvation in the box she was sent in, as I had decided not to use her, and consequently did not attend to her wants. As regards the death of the second queen bought for No. 2 in eighteen days (or less), I suggested in my letter that I thought that hive was examined too soon after her introduction, as I received a visit from an expert on August 11, and he examined all my hives. Mr. Brice takes exception to my not examining the hive thoroughly before May 25, and preaches me a little sermon on the text of thoroughness in all we do. Again I thank him; but I had a reason, which was that in thoroughly examining them in early spring I was in fear of chilling the brood (if there was any), and also of having the queen balled if she were in the hive.

I sincerely hope that I shall not fulfil his gloomy prognostications, and "go from bad to worse," but that I may with experience and thoroughness gain that skill and knowledge of which it is evident Mr. Brice has so large a share.—P. S., *Newark, July* 2.

SWARMING.

HOW TO KNOW THE HIVE FROM WHICH A SWARM HAS ISSUED.

[2010.] Doubtless so experienced a bee-keeper as Dr. Bartrum knows the following method of determining the parent hive, although he does not mention it in his note (2003, p. 266) of your last issue. Those to whom it may not be known will, I think, find it useful.

When a swarm has to be hived, unless you are quite certain whence it came, take a flour-dredger with you as well as a skep. There will generally be a few bees somewhere outside the skep after turning it over. If not, detach a few from the cluster and give them a thorough dusting, repeating it if necessary. Forthwith remove the skep and place it where the bees are not likely to find it; it need not be taken far, if well concealed. The dusted bees, disheartened by the flour, and having lost their fellow-swarmers, will before long make their way to the apiary, where they will be seen roaming disconsolately, like belated bee-ghosts. In from five to thirty minutes from their dusting they will be fanning vigorously on their own alighting-board, and all doubts as to the parent hive will be at an end.

In my neighbourhood swarming has been very persistent this season.—South Devon Enthusiast, *July* 6.

THE SEASON IN DUMFRIESSHIRE.

[2011.] In this neighbourhood—Annandale, Dumfriesshire—we have had a very bad season for bees. My first drones appeared on April 26, and up to May 10 all seemed very promising, and I put supers on two hives. These hives were on the principle of Mr. Wells's hives, but different so far that they had five perforated zinc slides between them working in a wooden division. My opinion as to the "Wells system" is that it very materially helps to keep the bees warm in winter and in early spring, and induces early breeding; but on that account we must take care to keep our bees very warm during such a very changeable spring as we have had, and, in fact, in all springs. On May 10, having put on two supers, and having wrapped them up very warm, I left home for a fortnight. During that time the weather, though bad, was not severely cold. The bees made no progress, and had very sensibly remained below. On my return I removed the supers and fed. I saw signs of the drones being

persecuted. As far as I can hear, most experienced bee-keepers in this neighbourhood have fed, but some inexperienced have been much surprised. They have seen their hives well filled with bees, and they have not considered whether, after the weather we have had, there is any honey in the flowers, and did not think feeding necessary. For some days after my return home we had many very cold nights, and I, in consequence, continued to feed. A change came, we had warmer weather, and as I had young queens in my hives, I had no wish for swarming. I again put on the supers, keeping all warm. I placed a bit of carpet on the top of one-half of each excluder sheet, and divided each super by means of a dummy, so as to keep one end of each warm. I put in a feeding-box for a night or two. This brought up the bees, and they occupied the remaining sections, and, though they did not get enough syrup to cause them to store any, yet it encouraged them, and they have now, I hope, permanently occupied both supers, but no sign of honey yet in them. The clover is just beginning, and if only the weather would take up, I still hope for the best, as the bees are numerous.—F. McC., *Ecclefechan, N.B.*

"HONOUR TO WHOM HONOUR IS DUE."

[2012.] We don't know the writer of the letter (2005, p. 266) in last week's B.J. with above heading, but beg to thank him very much for drawing attention to an unfair practice; and, secondly, in self-defence as exhibitors, beg to say the goods showed by us were our own manufacture. This is the second year the same thing has happened at the "Royal" Show. An entry or two is made in order to gain a legitimate standing in the bee department, and admittance for the exhibitor, distributors, and a boy, and the former then sends more in weight of old catalogues than exhibits, the consequence being that the bee department is made very untidy by these lists, many dated 1888, to the detriment of *bond-fide* collection exhibitors, the greater part of the people coming into the tent having catalogues forced upon them. This is one of the tricks of the trade, but we do not think it should be allowed again at the "Royal." We heard several quite disinterested parties complaining to the secretary, and one gentleman who came to us about it was very much disgusted. Many people came with the catalogue complained of and asked where certain things could be found—W. P. Meadows, Chas. Redshaw.

BEES PERFORATING FLOWERS.

[2013.] The enclosed bee I found yesterday working on the wild vetch. It was swift on the wing from flower to flower, pierced with its sharp, serated mandibles each flower at the base, on the outside, as quick as thought. I secured it, and as I have no doubt this is the species that perforate the bean and heather, I send it for identification, as I have never seen any statement as to what insect really makes the holes—for getting at the honey—in the base of the flowers named.

Please name it and give us your views, to oblige inquiring minds.—G. Stocks, *Sandiway, Northwich.*

[The bee sent belongs to the genus *Megachile*, or leaf-cutters. It is doubtful if it perforates the blossoms, but it visits the perforations made by bumble-bees in the flowers of the wild vetch. —Eds.]

GALVANISED HONEY VESSELS.

[2014.] In the Journal for June 21, p. 244, Mr. Woodley in "Notes by the Way" recommends galvanised vessels for holding honey. I must caution your readers against them (unless coated). Several years ago, during the editorship of the late Mr. Abbott, I found in packing over forty stocks for the winter the combs contained dead sealed brood (whole combs of it). I forwarded a portion to the Bee Journal Office, and Mr. F. R. Cheshire wrote in reply, "brood healthy, well fed, symptoms of poisoning, what had I fed the bees with, and in what vessel had it been placed?" I answered. The vessel was a galvanised one. The food was a little thin honey standing a month in vessel to which was added 1 cwt. sugar made into syrup and fed to bees. It was afterwards found out that the acid in the honey had acted on the zinc and slightly poisoned the syrup—not sufficiently so to kill the bees, but sufficient to kill the whole of the larvæ, and, if so, it must be a bad thing to store honey in.—J. R. Truss, *Ufford Heath, Stamford, July* 2.

NOTES FROM THE APIARY.

BY A SCOTCH BEE-KEEPER.

[2015.] I am sending you, under separate cover, a piece of comb which I consider to be badly affected with foul-brood; and I would stake my reputation that the hive from which I got it forms as nice a little nursery for the disease as is to be found in the south of Scotland.

Of course, you will understand that, as I am not endowed with infallibility, and having never seen a case of this disease up till now, I may be mistaken; but in this instance I do not think it possible, as the smell of the rotting matter is quite perceptible at a distance of some feet from the hive; the internal appearance also closely resembles the description given in the "Guide Book." I advised the cottager to whom the stock belonged to destroy the bees—about a handful—burn the frames and comb, scald the hive, and disinfect it with burning sulphur. This he faithfully promised to do; but as it has been robbed by

ts neighbouring stock, and also very probably by other bees in the district, I have little hope of the eradication of the disease for some time to come, especially as I find bee-keepers very unwilling to admit that their bees are diseased until they are so far reduced in numbers as not to be worth saving.

Now, Messrs. Editors, I am going to offer a little evidence in corroboration of what I suppose was the purport of Mr. J. Clark's letter, your answer to which appears on p. 249 of JOURNAL for June 21. On June 14 I received the present of a stock of bees from a friend, and during the afternoon of that day, while watching them, I saw a large bumble bee enter the hive, and after staying a few minutes come out. I also observed it doing the same thing in the afternoon, and again in the evening at about 9·30 I observed it go in, but although I waited a considerable time, I did not observe it come out, so I came to the conclusion that it had made up its mind to spend the night in the hive. The next day I made a new floor-board for this hive, and placed it beneath about noon. In the evening I went to examine the stock, and on lifting out the first frame of the cluster I found this bumble bee on the outskirts of the legitimate occupants of the hive. Of course, I conveyed it to the open air. The same night I again observed it trying to gain admittance, but as the entrance was too small by reason of the new floor, it was unable to do so. The next day I observed it still hovering about, but since then it has not been seen near the stock.

Honey is going to be very scarce in this district; we have only had a week in which the bees have had any chance of gathering surplus, and as it is late in the season it is hopeless to look for a big yield. Many bee-keepers were feeding up to June 26.

As I will very probably be helping cottagers to get rid of foul-brood should it have a hold in this district—as I hope it has not—I shall be very glad of any information regarding the cure of the disease. The Editors have my address, and I am sure they will, with their usual kindness, forward any letters addressed to the "DRONE."

[Comb received is badly infected with foul-brood. Beyond the use of preventives we cannot add much to what has appeared and is appearing in our pages week by week on the subject. We may say, however, that it is far better, where possible, to induce cottagers to destroy badly-diseased stocks, rather than attempt to cure them.—EDS.]

Echoes from the Hives.

East Fife, N.B., July 2.—In this part of the East of Scotland (a late and coldish district) June 26 was the first day on which any honey was gathered. I have now got on my second tier of supers on three stocks, storified as directed in "Guide Book." There seems a good deal of honey in the combs. I had two swarms yesterday and one to-day, which last one returned to the hive after losing its queen as I suppose. I cut out all queen cells but one, and gave upper stories to stop further swarming. My ten stocks are wedged up in front for ventilation. We are now having heavy rain.—ANDW. MASON.

Newport, Mon., July 3.—Lime trees and white clover are now in full blossom here, and bees are reported as being very strong in the district around. I know of one prime swarm being thrown off the last week in April, which is daily expected to send out a virgin swarm. The second swarm came out ten days after the first, and, through not being fed, nearly perished from starvation during the dull weather in May. It was, however, fed for about a week in the early part of June, and is now building up rapidly. Queen wasps were very numerous in April. Humble bees ditto. Run honey was sold in the market last autumn at 1s. and 1s. 2d. per lb.—J. S.

Cattle Market, Derby, July 5, 1894.—Bees working gloriously. Grand bee weather. White clover blooming well. If this weather continues during July, all is success. My twenty-five stocks can be heard humming fifty yards away.—T. WALKER.

New Hedges, Tenby, July 5.—I have had six swarms, one 8 to 8½ lb., and expect one or two more, though I am trying to check the stocks. This month has opened well for the bees, and mine are wonderfully busy. I put a crate of twenty-one sections on a good stock on May 12, but did not prevent the swarm which issued about the middle of June, though there was no surplus honey. This fine weather continuing they will do good work. Several stray swarms are reported in this district.—J. QUARTERMAIN.

Queries and Replies.

[1092.] *Forming Nucleus Hives.—Selecting Queen-cells.*—1. If two or three combs and bees are taken from a stock to form nucleus, is it safe to introduce a queen-cell from another stock the same day as the nuclei is formed, or must they stay three or four days before introducing the queen-cell to enable the bees to realise the loss of their queen? 2. Is one cell quite sufficient for a nucleus stock, or may two cells be introduced at will? 3. Sometimes when a stock has swarmed I find, perhaps, one or two young queens already hatched, and several not hatched. In such a case, should a young queen be left to re-queen hive, or would you advise removal of young queens and all cells but one? 4. Advice is sometimes given to preserve the best queen-cell when

cutting them out, and I have also seen it advised to remove all queen-cells but one not too far advanced. Will you please tell me what one has to go by to know when to preserve the best cell, or when it is not too far advanced, and is the latter advice given because it will produce the best queen, or to check the bees until their swarming fever is over?—ANXIOUS, *Dorset.*

REPLY.—1. Queen-cell may be given same day, but it is safer to allow twenty-four hours to elapse. 2. If you cannot rely on your own judgment in selecting a reliable cell, give two. 3. Leave a hatched-out queen by all means. 4. Without knowing the circumstances under which advice is given, we cannot say how far it applies to particular cases; but to imply that as a general rule a queen-cell, "not too far advanced," must be preserved for *re*-queening a stock would, we fear in too many cases, lead to its being left queenless.

[1093.] *Working Bees for Honey.*—I have a stock in straw skep and three early swarms in bar frame-hives. My skep swarmed last week, and a vagrant swarm came to my garden; both of these swarms have been put into straw skeps. Honey being my object—not increase of stocks. 1. What would you advise? Let them be as they are till autumn, and then unite those in skeps to those in hives, or do it now? 2. Is there any Bee Association in this county?—R. J., *Suffolk.*

REPLY.—1. In view of the very short time left before the year's honey gathering ends, we should allow all the stocks to do their best in the hives they now occupy. When the season is over, the several hives may be dealt with according to your desires as to increase and the condition in which they may be found. 2. None that we know of.

[1094.] *Swarming Mishaps.*—The stock of bees first referred to in my letter of the 12th ult. on re-queening as doing well swarmed on June 8; but being a dull day the swarm returned to its own hive. The following days were cold and wet until the 14th, when the swarm again issued, and, after hiving in a skep, was placed on a board. An hour or two later my groom noticed a considerable number of bees flying round the skep. Later I inspected them, and found large numbers of dead and dying bees on the board and under the skep. We therefore at once prepared a frame-hive, having in it fully worked-out but empty combs, placing it in the position occupied by the hive which had swarmed, and which we moved a little distance away, in order to strengthen the swarm with the flying bees. We then hived the swarm, and, putting a feeder on, left them. In the evening we weighed the dead, and they amounted to ½ lb. This morning I saw a large number of bees around the old hive, and, on inspecting the hive in which I had put the swarm, found it deserted, except for a very few bees, which were cleared out, and the hive closed. We then inspected the old hive, and found it crammed with bees, and on the only frame I took out were two queen-cells. 1. In front of the old hive we found the enclosed dead bee. It looks too small for a queen, but not the shape of a worker. Which is it? 2. Could you tell me the cause of death of so many of the swarm?—P. S., *Newark.*

REPLY.—1. Bee received is a young queen. 2. We can only suppose that a partial attempt at swarming by the bees of another hive has occurred simultaneously with the issue of swarm referred to, and, both lots of bees having united in one cluster, a fight resulted. If in the mêlée the queen accompanying the swarm got killed, it would, of course, account for the bees returning to the parent hive. It seems clear, however, that preparations for swarming had been made prior to the 8th, when the top swarm actually came off, and that the old queen met with some mishap on that day. Otherwise there would not have been a young queen hatched out six days later, viz., on the 14th.

[1095.] *Making Foundation from Foul-Broody Combs.*—I gather from your journal that wax from foul-broody combs should not be used for foundation. Now I make my own foundation "off a plaster cast," and have at present about 14 lb. of wax tainted with foul-brood which I would like to utilise for foundation. If it were possible to disinfect it—and I think it ought not to be an impossibility—kindly let me have your opinion, and perhaps some one else who may be similarly situated might have something to say on the matter.—JOHN H. ATKINS, *co. Cork.*

REPLY.—The question as to the possibility of foul-brood being propagated by using wax from diseased hives in the manufacture of comb-foundation has been discussed *pro* and *con*, but opinions still differ on the subject. We should certainly ourselves avoid risk by selling the wax known to be foul-broody for household use, and pay the extra cost for wax not known to be from diseased hives. If the wax was boiled gently for eight or ten hours it would reduce the risk to a minimum, and there is no other ready method of destroying the spores but boiling.

[1096.] *Preventing Swarming.*—1. Would it be a practical way of preventing swarming by taking the queen away, and forming with her a three-frame nuclei, putting the frames back to the queenless stock as often as the brood in the combs was sealed over (say, about once a week)? The stock being queenless would be unable to swarm, while the nuclei would be always too weak to do so. 2. Lately, when I have opened my hive, the lower part of brood-chamber has been very wet on sides and floor. As this hive is rain-tight, what causes this; and how can it be prevented if harmful to the bees?—CHAS. TOWNLEY, *Liverpool*

REPLY.—1. The plan proposed is not practicable, nor do we see any good purpose to be served if it could be carried out, for it is quite certain that no surplus honey would be stored by bees treated in that way. 2. The moisture is caused by the warm atmosphere of the hive interior condensing on the cooler surface of the hive sides. It will do no harm.

[1097].—*How Long may Brood be Exposed?*—1. How long may quilts be left off and frames of brood exposed to the open air without injury to the brood, as I am far from expert in discovering and catching queens? 2. Is it too late to raise young queens, and which is the most simple way of raising them? 3. Which is best method of spacing frames? Distance-pins that allow bees to get to the extreme edge of hive or "metal ends" that prevent this?—J. G., TONBRIDGE, *June* 23.

REPLY.—1. So long as the outside temperature is up to about 60 deg., no harm will result from leaving quilts off hives while examining frames. If the frames are replaced after examining for queen they need not be kept out of the hive for more than a few minutes at a time. 2. This is the best time for queen-raising. As to the most simple way, a book giving full details of the operation is indispensable to any one attempting queen-raising for the first time. 3. Most persons prefer metal ends when the "Standard" top bar of 17 in. long is used, but with a 15½ in. bar distance-pins should be used.

[1098.] *Introducing Virgin Queens.*—Can virgin queens be introduced successfully by direct introduction, as stated in B.B.J., Vol. xviii., 1890, pp. 559-60? If not, will you state the correct method?—J. H. NEW, *Watford.*

REPLY.—If a stock is but recently rendered queenless, or has queen-cells formed, a virgin queen may be run in at the entrance, and is usually accepted.

[1099.] *Increasing Stocks.*—I want an increase of stock, and know I must sacrifice surplus, as you say in answer to 1064, in June 7 number. 1. Can I remove a hive to another stand, and when the flying bees have taken possession of the fresh hive, on old stand, introduce a queen to them? If so, how soon after the removal? If this way will not do, please say what is an easier way of getting an increase? 2. In the case of a fertile worker or unmated queen, must it be removed before the fresh queen is introduced?—WILLIAM OLIVER, *Shrewsbury.*

REPLY.—1. Increase of stock should be obtained in the tried and orthodox manner of making artificial swarms, described in any good book on bee-keeping. The plan you propose would end in failure. 2. If an unmated queen is in the hive, she must be removed, but a fertile worker cannot be distinguished from the ordinary bee.

[1100.] *Fertilisation of Queens.—Drone Breeders.*—1. Are drones from a drone-breeding queen produced from worker-cells or only from drone-cells? 2. Would killing queen issuing with swarm cause bees to return, even if they settled down after that was done? 3. Is the young queen fertilised when a second swarm comes off, at time of issuing, or will it be necessary for her to leave the hive again?

REPLY.—1. A non-fertilised queen deposits her eggs in worker-cells, and the bees elongate them to accommodate the drone larvæ. 2. Yes. 3. No; she usually issues on her mating trip a day or two after hiving.—A. G. M., *Devon.*

Bee Shows to Come.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances. Liberal prizes. S. Upton, secretary, Lincoln.

July 20 and 21.—Bristol District B.K.A. at Knowle. Schedules from Messrs. J. Brown and E. A. S. Cotterell, 42, Baldwin Street, Bristol.

July 21.—Wotton-under-Edge, B.K.A. Show of honey, &c., in the Fete Ground. Entries close July 14. Hon. Sec., G. Gunston, Wotton-under-Edge.

July 25 and 26.—At Victoria Park, Leicester. Annual show of the Leicestershire Bee-Keepers' Association. Nine classes for bees and honey.

July 26.—Goole and District B.K.A. Honey show at Victoria Pleasure Grounds, Goole. Entries close July 23. J. Ludddington and G. L. Brown, hon. secs.

July 26.—Notts B.K.A. Annual County Show at Southwell. Liberal prizes. Open classes for appliances, hives, and extracted honey. Entries close July 19. Secretary, A. G. Pugh, Mona-street, Beeston, Notts. Other shows connected with the Notts B.K.A. will be held as follows:—Lowdham, July 19; Hucknall Torkard, July 24; Beeston, August 6; and Moorgreen, September 4

July 26.—At Bolton Royal Lancashire Agricultural Society's Show. Five classes for honey. £8 in prizes. Entries close July 14. For schedules apply Jas. Birch, secretary, 3, Brunswick-street, Liverpool.

July 27.—North Norfolk Bee-keepers' Association. Great show of honey at Melton Constable Park. Liberal prizes. Entries close July 18. Schedules from C. J. Cooke, Edgefield, Melton Constable.

August 1, 2, and 3.—At Beverley, Yorks. Prizes for bees, honey, and appliances. Marshall Stephenson, secretary, York.

August 6 and 7.—Northants B.K.A. Show of honey, &c., at Delapré-park, Northampton. Special prizes, 20s., 15s., 10s., 5s., and 2s. 6d. (open free to all comers), for

single 1 lb. jar of honey. Entries close July 25. Robt. Hefford, hon. sec., Boughton, Northampton.

August 7.—At the Abbey Park Flower Show, Leicester. Honey show and fair of the Leicester Bee-Keepers' Association. Applications for space and schedules to A. J. Martin, Cossington, Leicester, before July 28.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules, W. Wilson, Acrehead, Dumfries.

August 22 and 23.—Shropshire B.K.A. Annual show in connection with the Horticultural Society's great fête in "The Quarry," Shrewsbury. £35 in prizes for bees, honey, hives, and appliances. For prize-lists, &c., apply T. Whittingham, Upton Magina, near Shrewsbury.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

September 4 and 5.—At Coventry. In connection with the Warwickshire Agricultural Show. Annual show of the Warwickshire B.K.A. Liberal prizes for honey, bees, and appliances. For schedules apply J. N. Bower, hon. sec., Knowle.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

Shows have been arranged in connection with the Lincolnshire Bee-keepers' Association as follows :—July 17th, Brant Broughton ; 26th, Wragby, and Swinderby ; 31st, Heckington, Morton (Bourne) ; August 1st, Blankney, Sutton Bridge, and East Stockwith ; 2nd, Stickney ; 6th, Eltham ; 16th, Mablethorpe.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

J. E. Wilkes (W. Hampton).—The bees were evidently preparing to take full possession of the lower hive, and breeding would no doubt have been started there soon. The added frame of brood will facilitate their taking up their quarters below. The cone-clearer is only suitable for use during the early part of the season ; the "B off" can be used at all times.

D. H. Durrant (Acton).—If bees complete two racks of sections they will do well. A third rack is not likely to be filled if added, and will retard completion of the others.

R. H.—We should not advise dividing stocks for increase later than end of this month, unless surplus fertile queens are on hand for adding to them.

E. P. Johnson (Luton).—*Queens in "Wells" Hives.*—1. If one compartment becomes queenless the bees frequently fraternise in both without attempting to raise a successor. 2. We attribute the queens not meeting more to good luck than good management, as it is altogether wrong to leave a space round the dummy in a "Wells" hive.

A. M. (East Fife).—The contents of the few sealed cells in comb sent are so thoroughly dried up that no signs of brood is left in them. In one cell, however, we find a trace sufficient to warrant us in saying that the stock has been affected with foul brood. Why did you not send comb containing fresh brood ?

J. S. (Newport).—We cannot tell whether dead queen sent is from a foul broody hive or not. Nor is there any probability of the drone referred to having caused the mischief you suggest.

W. H. S. (Prenton).—*Getting Rid of Fertile Worker.*—If the bees are strong and worth saving, a laying queen may be given in the usual way. If accepted, the fertile worker eggs will soon disappear.

J. A. (Stourport).—*Unsealed Honey for Keeping.*—Honey which has not been sealed over by the bees is more or less unripe, and, in consequence, liable to fermentation if jarred off for keeping.

John Dempster (Kirkgate).—Cut out all queen-cells after second swarm comes off, and then return the swarm.

Several Letters, Queries, &c., are in type, and will appear next week.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence ; for every additional Three words or under, One Penny.

WANTED, Good CYLINDER EXTRACTOR. W. Green, Bishops Waltham, Hants. E 45

WANTED, Strong, Healthy SWARM (Carniolans). F., 43, Plymouth-road, Penarth, near Cardiff. E 44

NEW HONEY in SECTIONS WANTED. Best quality only taken. Cash. T. Smith & Co., 17, Cambridge-street, Hyde Park, London. E 40

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BEES for the HEATHER. — Guaranteed healthy 3-Frame Nuclei, 12s. 6d. ; 6-Frame Stocks, 17s. 6d. ; 8-Frame Ditto, 20s. ; 4-lb. Swarms, 12s. 6d. Packing included. C. Whiting, Valley Apiary, Hundon, Suffolk. E 42

HONEY.—To INCREASE DEMAND, use my Recipes with each jar. Print your name on them. Six, 1½d. ; 100, 1s. 6d. ; 500, 6s. ; 1,000, 10s.
WANTED, good CLOVER HONEY. Sample, &c.
Geo. Stocks, Sandiway, Northwich. E 41

(See over.)

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PURE ENGLISH BEES, splendid strain. Swarms with Queen, suitable for building up, 5s., Queens, 3s., on rail. Swarm Boxes 2s. 6d., Queen Boxes 1s., unless returned. ALSFORD, Expert, Blandford. E 38

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CHOICE YOUNG QUEENS, excellent strain, produced by seven years' careful breeding, guaranteed fertile, post free 5s., virgins, 2s. 6d. Rev. C. BRERETON, Pulborough, Sussex. 229

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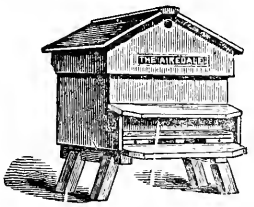

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Screw-capped (fitted with Cork Wads).

½-lb. ..	Per gross, 20/-.	Per dozen, 2/- ;	postage,	1/-
1-lb. ..	,, 21/6.	,, 2/4 ;	,,	1/6
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1-lb. ..	,, 15/-.	,, 1/6 ;	,,	1/6

Uncapping Knives, 1/6, 2/-, 2/6, and 2/9 each ; postage, 3d. each extra.

Honey Ripeners to hold 100 lbs., fitted with Lid and close-fitting Tap, 9/6 each.

Honey Strainers and Ripeners (combined), fitted with Lid and close-fitting Tap, 15/- each.

Cardboard Section Cases, glass one side, 1/8 per doz. post 1/-.

Ditto, glass two sides, 2/- per dozen, with gilt edging ; post, 1/-.

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Little Wonder Extractors, 7/6 each.

The Cylinder Extractors, from 21/- each, with close-fitting Tap, &c.

Extractors, with Gearing, &c., &c., 29/6 each.

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Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the committee was held at 105, Jermyn-street, on Thursday, the 12th inst. Present:—T. W. Cowan (in the chair), W. B. Carr, W. H. Harris, J. H. New, E. D. Tell, J. Garratt, and J. M. Hooker. *Ex-officio* John Huckle, secretary. Communications were received from the Hon. and Rev. H. Bligh, W. O'B. Glennie (treasurer), and the Vice-chairman (who had previously attended a sub-committee meeting, regretting their inability to be present.

The minutes of the last committee meeting, held on June 20, were read and confirmed. The following resolutions were moved by the chairman and carried unanimously: — 1. "That the best thanks of the association be given to the Rev. R. Errington, Mr. W. B. Carr, Mr. Cribb, Mr. Hooker, Mr. Jonas, Mr. Garratt, and Mr. Till for their valuable services in acting as judges and stewards of the Canterbury and Cambridge Exhibitions." 2. "The association desires to tender its best thanks to all those who contributed plants and flowers, and in other ways gratuitously assisted the committee in making the Canterbury and Cambridge Exhibitions successful."

The Finance Committee's report recommending payment of the prizes awarded at the Canterbury and Cambridge exhibitions, together with other accounts in connection therewith, was considered and adopted.

A letter was read from Miss Eyton, hon. secretary of the Shropshire Association, intimating that in the event of it being determined to hold a meeting of representatives of the Northern Associations at Shrewsbury the Shropshire Association would be pleased to entertain those attending the meeting to luncheon on the show ground. Resolved:—"That the best thanks of the committee be given to the Shropshire Association for the kind offer made through Miss Eyton."

Mr. Garratt called attention to the fact that as yet little had been done towards giving effect to the recommendation of the committee which met at Shrewsbury last year, in reference to the formation of centres for conducting third-class examinations. The matter was discussed at some length, it being the general opinion of the meeting that the question of centres, and the arrangements—financial and otherwise—by which the proposal could be successfully worked would be best determined upon by the affiliated associations, they having the greater knowledge of local requirements.

Resolved that the following Midland and Northern affiliated associations be invited to send a representative to attend a meeting to be held at Shrewsbury on Wednesday, August 22, at three p.m., viz., Bristol, Derbyshire, Glamorganshire, Herefordshire, Lancashire, Somersetshire, Lincolnshire, Notts, Oxon, Salop, Staffs, Warwickshire, Worcestershire, and Yorkshire, and that the subject of centres and arrangements for third-class examinations be taken into consideration.

In response to an appeal made by County Councils, it was resolved to make the necessary arrangements for granting certificates after examination for lectureships in bee-science.

Other routine business was transacted and the committee adjourned till Thursday, September 13.

A PLEASANT GATHERING.

An exceedingly pleasant gathering of bee-keepers took place on the afternoon of Wednesday, the 4th inst., at the town residence of Mr. T. W. Cowan, Hampstead, on the invitation of that gentleman to meet a distinguished continental bee-keeper in the person of Monsieur Ed. Bertrand, of Nyon, Switzerland, Editor of the *Revue International d'Apiculture*.

M. and Madame Bertrand have been staying in England for over a month past as the guests of Mr. Cowan, and after spending some time at the latter's place at Fowey, a beautiful part of the coast of Cornwall, they returned to town a fortnight ago, since which time visits have been paid to several representative English apiaries and appliance manufacturers. M. Bertrand was also present at the "Royal" show, Cambridge, and at the exhibition of the Farningham (Kent) Rose Society, in connection with which a show of honey was also held. A close and interested observer, M. Bertrand has thus had an opportunity of seeing for himself the conditions under which bee-keeping is carried on in this country, and has, we understand, been highly gratified with all he saw.

At the particular function to which reference has at the outset been made there were present—besides M. and Madame Bertrand—Mrs. Bancks, Miss Edith Cowan, Miss Tate, the Revs. Dr. Bartrum, F. T. Scott, G. W. Bancks, C. Brereton, and Henry Sharpe, Major Fair, Messrs. W. H. Harris, J. M. Hooker, J. Garratt, W. Broughton Carr, E. D. Till, F. H. Meggy, W. J. Sheppard, T. B. Blow, and J. H. Howard.

After luncheon Mr. Cowan said it was his earnest wish that his friend, M. Bertrand, should—before leaving for his home in Switzerland—have the opportunity of becoming personally acquainted with a few representa- British bee-keepers; hence the present gathering. In formally introducing those present to his friend and guest, he wished to say of the latter that he is not only well known as an authority in all lands where bee literature is read, but as a gentleman who has done more than any other to raise bee-keeping to its present standing in Switzerland, where it is recognised and assisted by the Government, besides possessing a strong and well-organised

association, having for its object the promotion of the pursuit and the good of bee-keepers.

In replying, M. Bertrand, who was most cordially received, expressed his appreciation of the honour done him and the pleasure he felt in meeting with some of the best-known gentlemen connected with bee-keeping in this country. He had, thanks to his friend Mr. Cowan, been enabled to see a good deal of British bee-keeping during the last week or two, and had been both interested and delighted with the visits paid. As a regular reader of the BRITISH BEE JOURNAL, he was kept conversant with what was going on in this country, but it was an increased pleasure to see with his own eyes that the methods followed left nothing to be learned from other countries, so far as bee-keeping went. M. Bertrand concluded with some very complimentary remarks having reference to the high estimation in which his host is held on the Continent. By desire, however, of our Senior Editor, we ask that M. Bertrand's "too laudatory remarks may be taken as read."

The meeting afterwards partook of a conversational character, and was enjoyed as bee-keepers know how to enjoy such opportunities for the interchange of thought on an occasion admitted by all present to be a "red-letter day" in their experiences. Before parting a souvenir of the event was demanded, and Mr. Cowan eventually induced to conform to popular custom by good-humouredly producing his camera for the "inevitable photo," this time an impromptu and "home-made" one. A very enjoyable gathering was brought to an end by wishing *bon voyage* to M. and Madame Bertrand, who left for the Continent on the 6th inst.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

THE MEETING OF BEE-KEEPERS AT CAMBRIDGE.

[2016.] In to-day's issue of the B.B.J. reference is made to the remarks I made at the conference at Cambridge in terms that are, I think, not only unnecessarily severe, but really unfair, as the only inference that can be drawn from your report of the proceedings is that I am hostile to the formation of an association in Cambridgeshire. You have shown up the dark side of the picture as far as I am concerned, without one redeeming feature. It s not true that I am hostile to the formation of the association, for I stated most emphatically that I welcomed the effort that was being made, and wished it a successful issue; and further, that anything I could do to help on the work I should gladly do. The course I took was dictated by a sense of duty, and I desired my remarks on the relationship of the B.B.K.A. to the affiliated associations to be to the ultimate benefit of both in carrying on the work for which they were formed. Mr. Bevan protested against an accusation I never even dreamt of bringing against the president, the Baroness Burdett-Coutts, and of this he was reminded by some gentlemen near him when he sat down.

I said that with that noble lady, noted throughout the land for her philanthropy, at the head of the association, more ought to have been accomplished; and I venture to assert that the prophecy of the late Rev. H. R. Peel in 1879, that there would be an association in every county within ten years of that time would not have been uttered if that gentleman had not thought such a result of the work then going on not only practicable but extremely probable.

While admitting that others may fairly doubt the propriety of criticising the work of the B.B.K.A. on the occasion referred to, I must say that I considered both the time and place appropriate for a fair criticism, with a view to getting a definite statement on the aim and objects of an association to be formed in a county where, for various reasons, several secretaries have tried their hands and failed.—C. N. WHITE, *Somersham, Hunts, July* 12th.

[We are glad to receive the above disclaimer, and to believe that our correspondent was actuated by the best of motives in the line he chose to take on the occasion referred to. We are, however, reminded that :—

"It's all very well to dissemble your love,
But why did you kick me downstairs?"

and certainly Mr. White's method of "dissembling" was very effective indeed, as is the application of the last line of the couplet quoted when judged by his words. Moreover, our estimate of his remarks has been endorsed on all sides by those who heard them. Fair criticism no one can object to, but when there is no foundation for adverse comment, and nothing beyond assertion to justify it, such criticism is *not* fair. It is, however, satisfactory to learn that Mr. White is willing to help on the work of *re*constructing the Cambs. Association, and we shall not be slow in thankfully acknowledging any practical assistance he may render in that direction.—EDS.]

SELF-HIVERS.

[2017.] I am sending you a brief account of my experiences with my self-hiver. I have this season had altogether three swarms hive themselves nicely. The first I sent you an account of. The second swarmed and

returned to the hive, owing to the queen escaping back down the passage and re-entering the hive. I find the top set of drop doors or plates want hanging differently to what I now have them, to make them impassable backwards. I did not interfere with the hiver then, and the next morning the bees swarmed and hived themselves nicely in the presence of several onlookers. The third lot entirely upset all my calculations. They swarmed out at about ten o'clock, and, without settling, came back into the box in capital style, making me think it was really all that could be desired; but half an hour later they vacated the box and returned to the hive, leaving the queen and a score or so of drones in the box, along with one or two workers. I should like your opinion on that point, for it looks as if the swarm will often be saved at the expense of the queen. About midday I ran the queen back into the hive. That was on June 21. On the 26th they swarmed again, this time going over a high wall and settling on a currant-bush in an unfriendly neighbour's garden. I felt pleased to think I had not got to go there for them, as I could see the queen was again trapped; but, as the bees of the swarm were over ten minutes before they commenced to rush back, I was again in suspense; however, they were all nicely self-hived in about twenty minutes from starting. I wondered what would be their antics if given a night of it, seeing that in the evening they were still clustering contendedly in the box. I determined to try them—and as they remained loyal to their queen, I indulged them with having their photo taken at 7.30 next morning (27th). A copy enclosed.

I wonder now if my two friends who are trying my self-hivers for me on their hives at Withdeane—whose hives looked like throwing off swarms much more than mine—have had disloyal swarms, and have thrown their queens away for drones themselves in the evening when clearing the trap. It must be either that or else the hivers are very great deterrents to swarming; but the way their bees have worked with the hivers on, and the splendid racks of sections on them, now nearly choke-full, have delighted them more than swarms could have done. Neither of my friends can distinguish a queen.

My only other experience was most disappointing. I had forgotten to place the receiving-box on one hive—which was otherwise in proper working order—and was attending to two other swarms that came off simultaneously from hives that had no hivers on, when I saw the swarm boiling up through hiver with no receiver on! I hurriedly put a box on, but too late: the queen had passed up and all three swarms joined together. I am preparing a hiver for all but one of my hives for next season, as one stock will keep the other hives supplied with drones. As already said, I should like to have your opinion about that disloyalty to queens on the part of swarms, as it looks as if perfection is impossible in any form of self-hiver.—G. W. Hole, *Patcham, Sussex.*

[It would appear as if swarms will at times act as stated, no matter what form of self-hiver is used, but, after all, the percentage of desertions has not been great in our correspondents' experience. Besides, the loss of the swarm is in any case prevented, and that is a great point gained.—Eds.]

"WELLS" HIVES.

DO THEY CONTAIN ONE OR TWO STOCKS OF BEES?

[2018.] I was not a little surprised to find Mr. Wells (1888, p. 244) contending that his hives should be considered as one stock; neither can I see the use of persons telling us what they have obtained from a certain stock in a certain season. What we want is a system that will give us high results on the average both on stocks and a number of years. Far from opposing the idea of a "Wells" hive containing only one stock, it is charitable of any one to say it consists of two only, for does he not at the end of each year add a nucleus to each hive?—such a nucleus as is fast approaching the condition of a stock. Mr. Wells can, if he likes, call it the produce of one hive; so might any one having a hive large enough to hold a dozen stocks. It is not how many cwts. of honey can be produced from the least number of hives, but how many can be produced with the least labour; for what does it matter whether you call the "Wells" hive a nucleus, a single stock, two, or a dozen stocks if the labour required to produce a certain quantity of honey from it equals that required by two ordinary stocks in ordinary hives. Does Mr. Wells mean that a "Wells" hive is no more trouble than an ordinary hive? In the letter referred to he argues about dividing a stock in the autumn, and giving a queen to the queenless half. I would remind him that this is not the system that has given him the good results he has published, and which will not do so. From the time the dummy is inserted it is converted into two small stocks requiring in future double labour.

Again, as to "not being off with the old love," &c.—how does he make it fit the case when he kills off his old queen? And if Mr. Wood and I purchased a second swarm, &c., in my opinion there would be no chance in it. I am certain that he cannot get double the amount of honey under the circumstances he relates unless he gets two exceptionally good queens, and a very bad one heads the two swarms in the single hive.—Leonard Smith, *Elstow, Bedford.*

[2019.] As to whether a double queen stock should be called one or two colonies, it

seems to me that as each lot requires about as much food and room as two stocks, they may claim to be considered as two colonies, and their yield reckoned accordingly.

An ordinary stock requires at least 30 lb. of stores to carry it safely through the winter to the main honey flow, and a double queen stock with the perforated divider between also seems to require about 30 lb. each of stores; and, as each lot requires about ten frames for brood and winter storage, they are practically two stocks—the only difference being that the two colonies work together in one surplus chamber. At least, that is my experience of wintering such stocks.

Where the advantage of the double queen system comes in is of having the united surplus population working together in one chamber in a short honey flow. Still, I am inclined to consider them as two stocks.—APIARIST, *Oxford, July* 14.

[We think the above controversy may now be allowed to drop.—EDS.]

BEES IN A THUNDERSTORM.

QUEEN LARVÆ KILLED IN THE CELLS BY LIGHTNING.

[2020.] I shall have occasion to remember the storm on Friday night, the 6th inst., when, as usual, I was with my son busy with the bees feeding the young stocks. At about 8.45 the sky became so black that we were obliged to stop; a few peals of thunder, with rather vivid flashes of lightning, made my son go indoors, while I went into the bee-house to watch the storm. In a few minutes I altered my mind. I do not know why, but the irresistible something seemed to say "Go out of this shed," and I went. After walking about fifteen paces, there came a report so loud that even now I do not think I can grasp its intensity, and in an instant I found myself prostrate on the ground. Half dazed I scrambled to my feet, naturally looked towards the bees, and from the bee-house I had just left there shot up a lurid flame! I grasped the situation at once, the bee-house, containing twelve stocks of bees, had been struck by lightning, and was on fire! A very few moments sufficed to enlist the help of the whole of my family to save the bees, and with such help, though we had some sixty yards to carry the water, I am grateful to say the fire was put out, and very little damage was done. I was myself rather badly shaken, but very thankful for my providential escape, a hole in the roof of bee-house, the rafters blackened, being the worst that followed. I have, however, to note one particular after-effect which has an interest for bee-keepers quite apart from me and my personal surroundings, and that is the way in which the shock of the electric fluid acted upon the queens under process of being reared in the hives. Out of twelve queen-cells which were going on nicely till the storm, eight of the embryo queens were killed outright, the queen larvæ turning black and smelling very offensively in a short time. I don't know if this has been before noticed, but I thought it well to place the circumstance on record, for the benefit of the craft.—H. W. BRICE, *Thornton Heath.*

FORCING BEES TO SWARM.

[2021.] On July 3 I put a queen-cell in the top of a skep, the bees of which had been hanging out for about fourteen days; half-an-hour after a large swarm came off. The same night I looked into the skep, and found the queen-cell firmly built into the comb. I then put the skep on to a frame-hive. On the 4th I found the queen hatched out, and on the 6th many young drones were cast out of the skep. They have not swarmed again. I should like to know what your readers think of this plan of proceeding, as it was my own idea.—FUMIGATOR, *West Hartlepool, July* 15.

[Judging by results, the plan is a very good one, and is well worth trying where convenient. —EDS.]

SWARMING VAGARIES.

[2022.] I can answer "T. F.'s" first query (1089, page 268) in the affirmative. It *is* possible for a second swarm to come off four days after the issue of the first one. On June 12 one of my double hives swarmed, and, to my surprise, the cast or second swarm came out from it on the 16th. As I actually saw them both issue, there can be no mistake about it. The swarm was an enormous one, and was joined on the wing by a swarm from a single hive, and they all pitched together on an apple-tree. I, fortunately, got the double and single swarms separated, but the two queens having got together, I could not separate the two halves of the double swarm, so could not return them. I hived them in a combination hive with fourteen frames, and gave them a crate of thirty sections, which are all but finished off to-day. The cast was also a large one, and had so many young queens with it that I had no difficulty in getting the two halves separate, and returned them to their old quarters. In doing this I found no fewer than forty-six queen-cells—twenty-three on each side—two on each side being unsealed, and the rest either sealed or empty. It is clear that we cannot calculate on bees always doing things in the same way. Bees about here have pulled up a bit lately, but it is going to be far from a bumper season.—N. LOWIS, *Bridgwater, July* 13.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of June, 1894, was £5,492.—*From a return furnished by the Statistical Office, H.M. Customs.*

Echoes from the Hives.

Honey Cott, Weston, Leamington, July 7, 1894.—Although we have had some hot, dry weather, honey has not come in so well as might have been wished; not the fault of the bees, however, but the ruthless mower that has lain the crops low. Beans are nearly over, there only remains the wild mustard. Bees have lain out very much since the temperature has gone to 80 deg. and upwards. A little thunder was heard yesterday, and it is cooler. If we could get a good soaking rain we might get some white clover honey yet, though I expect the blackberries, which are beginning to bloom, will give some dark stuff, but any port in a storm. Unfortunately we have no limes.—JOHN WALTON.

Padstow, Cornwall, July 9.—The continued drought of 1893 having dried up the pastures, prevented any possibility of the expected yearly surplus. However, after the middle of July, enough was stored to carry my bees safely through the past winter, and they were ready for the first flowers of our very early spring. By the end of March some drones were on the wing, and at the end of April the majority of my twenty stocks were far in advance of ordinary years, and waiting for the necessary temperature to swarm. May proved a wretchedly bleak and wet time, in which little advance could be made. On May 18 one hive was doubled, twenty-one days after young queens had been hatched, but no swarm issued until eighteen more days had passed. Rather strange, is it not? [Very unusual.—EDS.] On June 14 a favourable change came, and the swarming fever commenced as soon as the temperature rose. On Saturday last my first sections were taken, so with continued propitious weather the season promises to be a fair one.—PETER TONKIN.

Croughton, Brackly, July 10.—My bees have done well since the longest day, but won't come up to last year, I think. I like the wide ends for shallow frames; they give some grand slabs of honey, and go through the extractor better, I think, than narrow ones. I have not had a breakage yet. I have had unusual experience this year with swarming. The first was hearing "piping" before the swarm came off. This was in a frame hive. In another case, after giving a swarm and a cast, the parent stock has dwindled down to very few bees, and is now queenless. One large swarm flew away and entered into a hollow tree, where it could not be got at, as it is a large elm, and the hole is a long way up the tree trunk, besides being very small. I have had more swarms than usual this year, but not like some which have been reported in the JOURNAL. White clover is very thin about us this season. Lime-trees are just beginning to bloom, and are very full; if the weather comes right we shall do well from them, but some years they yielded very little honey though full of bloom.—J. LAMBERT.

Fairspeir, Ascott-Wychwood, Oxford, July 14, 1894.—The season in these parts is almost over, the sainfoin and what little clover there was having been cut a fortnight since. The honey flow commenced about June 15, up to which date every one's stocks were in a starvation state. The bees have done fairly well lately from the wild mustard, but it will not have been a good season—starting so late and finishing so soon. I doubt if an average of more than 20 lb. per hive will be secured.—APIARIST.

Queries and Replies.

[1101.] *Mis-shapen Combs.*—I have a stock of bees in a hive of ten frames; the two back combs are built straight three parts of the way across the frames; the next frame is built about the same length, and then across the two back frames the comb is in semicircular form, and so on, the other ends of frames being made up of small pieces of comb. The bees seem to be capital workers. I should be very glad of your advice as to what way to proceed, whether to put the bees on new frames filled with foundation, or to let them winter as they are? I should have said the frames are quite immovable, therefore the benefits of frame hive are lost to me. I have but recently commenced bee-keeping and reading your valuable paper, which I find extremely interesting and instructive.—E. J. B., *Enfield, Middlesex.*

REPLY.—If the frames with the mis-shapen combs can be removed from the hive together, the distorted parts may be cut out, and with a straight underedge to start from, a strip of foundation may be fitted close up to it, which the bees will eventually join on to and complete the combs.

[1102.] *Driving Bees.*—As the season for driving the bees of condemned stocks is now coming on, will you kindly say:—1. Suppose you were about to drive six stocks in a cottager's garden, would you, while driving one stock, stop up the entrances of the remaining five? 2. After having driven the stock, would you place the bees on the old stand with the entrance open to receive the flying bees? Or 3. If you wanted to drive two lots of bees into one skep, what would you do with the flying bees? 4. I have been advised by a friend to procure a queen to replace an old one from a certain strain advertised as good for the heather. I am given to understand she would be descended from a Syrio-native mother mated with a Carniolan drone. I should like your opinion before purchasing one.—J. O. WILSON, *Guildford, July* 10.

REPLY.—1 and 2. Supposing the bees to be driven before work for the day was over, we should move the skep to be operated on to a shady spot some distance away, and set an empty skep on the old stand to occupy any bees that might be away in the fields. After driving, the skep and driven bees should be set in its original position to gather in all stragglers. If the work was done in the evening when all was quiet, the other five stocks of bees might with advantage be confined, but allowing free ventilation. 3. An empty skep should always be put on the stand from whence the stock has been removed for driving to keep the flying bees from entering other hives. 4. If your adviser has had favourable experience of the bees referred to, you might be guided by him. We do not recommend any particular bees of which we have had no personal experience.

[1103.] *Vicious Bees.*—I have lately started a hive of bees in my garden, but cannot work within some yards of it without getting more or less bees buzzing about me. I should not care, but to a novice it is not pleasant to have a bee on one's neck or ear, where they invariably get entangled in my hair and then sting! 1. Is all this usual? for it makes it difficult to work in my garden when the bees follow me about, as they usually do in the day-time. When transferring the swarm to the hive from travelling-box I was only stung twice—yet simply working near them I this morning was stung three or four times. 2. By the bye, is it true—as country people say—that bees only sting once, and the act kills them?—AXE, *Axminster, July* 11.

REPLY.—1. It occasionally happens that particular stocks of bees are naturally irascible, and inclined to sting without provocation. When this trait continues there is no remedy but re-queening. Much may, however, be done in quieting by not interfering with them more than is needed for a few weeks to come, and doing any hoeing or raking about the hives in the early morning or in the evening. Bees have been more than usually disposed to be troublesome for a week or two past, but this will soon pass away. 2. The bee may live for some time after losing its sting, but does no good afterwards.

[1104.] *Introducing Queens.* — Having a queen which I desired to replace, I, on 27th ult., removed her and made up a nucleus on four frames, as I did not want to destroy her until her successor was doing well. On 30th found several queen-cells started in stock, and on 1st inst. inserted new queen by the "direct introduction" method. Was unable to examine hive as intended on 7th, but on arriving home on 13th inst. found bees had swarmed. I returned them to original hive, but before doing so I examined combs and found several empty queen-cells, and two (apparently) still occupied. Next morning I found queen—sent herewith (wrapped in paper) —thrown out, and later in the day three more, two of which I send. I also enclose a couple of drones and a few workers for inspection, and shall be glad to know—1. Is the first queen found fertile or a virgin? 2. If the latter, is she sister to other queens? 3. Are bees hybrids? If so, what races are most probably crossed? 4. Likely cause of introduced queen being rejected. 5. In view of young queen being probably raised from weaned larva, would it be advisable to procure another fertile one, or would you allow matters to remain as they are? I may say, original queen shows no bands at all, and in the older workers they are very indistinct. Bees are very gentle and industrious. — HEATHER, *Lambeth, July* 14.

REPLY.—1 and 2. No; we take her to be the queen introduced on the 1st inst. 3. Bees are slightly crossed with Carniolan blood. 4. We can only suppose it to be through faulty introduction. 5. Leave matters as they are.

[1105.] *Dividing Stocks for Increase.—Birds Carrying Off Bees.*—In reply to 1064, p. 227, of B.J., June 7, you recommend dividing a strong stock into two or three portions, and, being a young beginner, I thought this date was too late for rearing a queen in time to be mated safely this season. Is this so or not? Mr. Lyon (1896, p. 255) writes that martins are taking his bees; but here I have had swallows, starlings, common house-sparrows, bluecaps, chaffinches, tree-creepers, and even robins carrying off my bees for a year past. I have, however, now bought a gun, and with its help they are less troublesome now. A neighbouring bee-keeper tells me that the sparrows have been fetching his bees off his alighting-boards, but the rascals about here wait on the house-tops, about a distance of 50 yards or so, and dart up in the air, catching the bees as they were flying past. 2. Is there a better remedy than shooting them, as they get further away out of the reach of a gun? The weather has been beautiful here for bees since 21st ult. till to-day (July 2), which is cloudy, my weakest hive (a skep that has swarmed) increasing 2 lb. daily.—S. H. TOLLINGTON, *Hathern, Leicestershire, July* 2.

REPLY.—1. There is still ample time to have queens reared and mated if care is taken that drones are not killed off before the young queens are fertilised. 2. Shooting and trapping are the only remedies for troublesome birds, though, when the mischief is excessive, some bee-keepers stretch an open net in front of the hive-entrances to keep the marauders off alighting-boards.

[1106.] *Swarms Returning to Parent Hive.* —On Saturday, June 16, I had a swarm from a frame hive. My wife saw them settle down

on a bush about twenty yards away from the hive they came from, and, as I was due home in about half an hour, she decided to leave them for me to hive. On going again to look at them twenty minutes later, she found the swarm gone, and, from the great number of bees clustered on and flying round the parent hive, we both concluded that the bees had returned to it. 1. If they had, how do you account for them not having swarmed again, seeing that to-day is the thirteenth day after? 2. What do you think was the reason of their returning?—A. H. E., *Leeds.*

Reply.—1. Only by supposing that some accident has befallen the old queen on the issue of the swarm, and that the young one has been allowed to head the colony without further swarming, just as happens when no second swarm comes off after the first has left. 2. Above reply covers this query, but whenever a prime swarm returns to its hive and does not issue again in a day or two, the fate of the old queen may be safely determined by listening at the hive for "piping" on the evening of the eighth or ninth day afterwards.

[1107.] *Swarm Deserting its Queen.*—On visiting a friend of mine, I found one of his hives had swarmed. Several attempts had been made to hive the swarm, but without success, for when I arrived in the evening I saw that the swarm had returned to the original hive, and were hanging out. On examining the hive I found that the space at back of the dummy (which had been partly filled with paper-packing for warmth) was crowded with bees. As it was getting late I left them, but on passing through the garden I noticed the skep on a table in which the swarm had been hived, but subsequently deserted. It was empty, but on closer examination I noticed a queen and one solitary bee on the outside of the skep. I placed her in the skep, and then brushed in a few bees from the cluster at the hive entrance along with her. I then turned the skep on to a board, raising the entrance, and shook all the bees from the paper at back of the hive; when these had run in, I lifted the skep, and placed it over the back of the hive and drove those below into skep as well. I then replaced the skep on the board as before, and shook two frames of bees from the parent hive and let them run in. I intend this evening to transfer the bees into a frame hive. 1. What reason would you suggest for the swarm leaving the queen? Also did I act correctly under the circumstances? 2. Will the bees in the old hive now be likely to settle down and give up the idea of a cast in eight or nine days, if I place a super on top, or give more frames at the back? My seven stocks, two of which are in "Wells" hives, seem strong, and are now in the supers, but up to the last week of June the weather has been cold and wet and not, given the bees a chance to work. By giving plenty of room I have not had a single swarm this season. Others round here have had swarms, but in all cases no supers have been on.—Wm. Greener, *Gowertown.*

Reply.—1. We can only suppose that the desertion arose through want of experience on the part of whoever made the attempt at hiving the swarm. 2. If the added bees have stayed with the queen, and formed a swarm, it proves that you acted correctly. 3. We think it probable that a second swarm will issue from the parent hive. Any uncertainty on the point may, however, be removed by listening for the usual "queen piping" on the evening of the eighth or ninth day after the first swarm issued. If that is heard, a swarm may safely be looked for, even though super room has been given.

[1108.] *Honey from Foul-broody Stocks.*—My hives, I fear, have foul brood. I took the frames from six of them, and gave them starters to go on. I found one double-queen hive not so badly affected, and deeming it a pity to destroy such a great number of young bees, treated it thus:—I took the frames from below, replacing them with starters and full sheets alternately. Then, with excluder zinc between, I put all frames that were below on top. Now I find the frames are nearly all full with sealed honey, and I therefore ask:—1. Is the honey from these frames any good? In some of the hives there are frames full of sealed honey at the side of stock. 2. Can anything be done with this honey when trying to cure them?—H. R.

Reply.—1. There is no reason why honey from the stocks referred to should not be used for all ordinary household purposes. 2. We should remove every particle of honey from stocks under treatment for foul brood.

[1109.] *Bees not Entering Sections.*—I bought a stock of bees in frame hive about the middle of April, the bees covering nine frames, there being also two frames with full sheets of foundation which the owner had just put in. Early in June I noticed two or three scores of dead bees and grubs in front of hive, so I fed them liberally with syrup until weather became warmer. About ten days ago all seemed to be going well, and the bees covered ten frames, so I took away the last one, moved up the division board, and put on a rack of sections containing foundation; but up to the present time they have not taken possession, so I can only suppose they are storing honey in the brood combs. 1. Can you say why they do not work in the sections, and how I can obtain any honey this year? I should say that a frame of queen excluder zinc was placed between brood nest and sections. 2. How can I tell sealed honey cells from sealed brood cells?—J. H., *Manchester.*

Reply.—1. If sections are carefully and warmly wrapped, so as to conserve the internal heat as much as possible, and bees do not take possession, it must be from one of two causes

—viz., the bees are not sufficiently numerous, or else honey is not plentiful in the district. We should try them without the excluder for a day or two. 2. Once you see see both sealed honey and sealed brood on same frame of comb you will have no difficulty in distinguishing between the two.

[1110.] *Dealing with Foul Brood.*—I forward a piece of comb which I suspect to be foul broody. I never saw the pest before, and never heard of it in this neighbourhood, although I have kept bees off and on for thirty years, but only lately adopted the modern system, through seeing your valuable little journal (which was put into my hand by a friend), and I have been a constant reader ever since. I was led to suspect this hive through having no surplus from it last year, though the bees always appeared strong, and I determined then to destroy them, but owing to the scarcity of swarms they were allowed to stand. This season they again appeared to come on slowly, for while the adjoining hive had filled their crate of twenty-four sections, and given off two fine swarms, this stock was working very tardily in a super. Having a new combination hive on hand, I determined, on the afternoon of the 30th ult., to transfer the bees to it, and give them their brood at back of dummy; but, upon examining the frames afterwards to make sure I had not missed the queen. I discovered this mess to my consternation. I shall be glad if you will say—1. If you consider it a bad case? and 2. Whether I ought to allow the bees to remain in new hive, and trust to naphthaline and naphthol beta later on? The bees are very numerous, and are at work with a will, seeming quite pleased with their new quarters. 3. Is it likely I have other hives affected? The adjoining hive to the infected one was stocked in 1887, and has never been moved or raised from its stand since, nor has its crate which holds the sections been taken off bodily since it was first put on. I have always taken the sections out one by one, and left the crate with some sections in on the hive all winter. It has never missed swarming twice or thrice, besides giving me a crate or more of sections every year, except 1881, till last season, when I had seventy good sections from it, but no swarms. I shall be glad if you can help with any advice or comment. I have committed frames, with contents, to the fire this morning. 4. Shall I burn hive and crate? I shall examine all in turn.—East Coaster.

Reply.—1. The comb received has a large quantity of dead larvæ in the cells, but we only find a slight trace of foul-brood in the whole. It would appear that the brood has become chilled, and so perished from the fact of the bees—for some reason known only to yourself—not having access to the combs containing it, which were placed behind the dummy. 2. Having destroyed the combs of dead brood, we think there is every chance of the bees getting rid of the disease if naphthaline is used continuously in the new hive. 3. Only inspection will show this, but if the bees are doing well the inference is that they are all right. 4. No; but they should be thoroughly disinfected before using again.

Bee Shows to Come.

July 18, 19, 20.—Lincolnshire Agricultural Society's Show at Great Grimsby. Bees, hives, honey, and appliances.

July 20 and 21.—Bristol District B.K.A. at Knowle.

July 21. — Wotton-under-Edge, B.K.A. Show of honey, &c., in the Fête Ground.

July 25 and 26.—At Victoria Park, Leicester. Annual show of the Leicestershire Bee-Keepers' Association. Nine classes for bees and honey. A. J. Martin, Sec., Cossington, Leicester.

July 26. — Goole and District B.K.A. Honey show at Victoria Pleasure Grounds, Goole. Entries close July 23. J. Ludddington and G. L. Brown, hon. secs.

July 26.—Notts B.K.A. Annual County Show at Southwell. Hon. Secretary, A. G. Pugh, Mona-street, Beeston, Notts. Other shows connected with the Notts B.K.A. will be held as follows:—Lowdham, July 19; Hucknall Torkard, July 24; Beeston, August 6; and Moorgreen, September 4.

July 26.—At Bolton. Royal Lancashire Agricultural Society's Show. Five classes for honey.

July 27.—North Norfolk Bee-keepers' Association. Great show of honey at Melton Constable Park.

August 1, 2, and 3—At Beverley, Yorks. Prizes for bees, honey, and appliances. Marshall Stephenson, secretary, York.

August 6.—Berks Association (Newbury District). Show of honey, &c. Entries close August 3. Special prizes for best 1-lb. section. Entry forms of Mr. W. Hawkes, hon. sec., Newbury.

August 6 and 7. — Northants B.K.A. Show of honey, &c., at Delapré-park, Northampton. Special prizes, 20s., 15s., 10s., 5s., and 2s. 6d. (open free to all comers), for single 1 lb. jar of honey. Entries close July 25. Robt. Hefford, hon. sec., Boughton, Northampton.

August 7.—At the Abbey Park Flower Show, Leicester. Honey show and fair of the Leicester Bee-Keepers' Association. Applications for space and schedules to A. J. Martin, Cossington, Leicester, before July 28.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules, W. Wilson, Acrehead, Dumfries.

August 16.—At Audlem, Cheshire. Liberal prizes for honey and beeswax. Entries close August 9. For schedules, apply T. H. Smith, solicitor, Audlem.

August 16.—At Maidenhead, Berks. Show of honey, bees, and appliances. Windsor District, Berks B.K.A., in conjunction with the Maidenhead Horticultural Society. Over £7 value in prizes. For schedule apply to hon. sec., W. S. Darby, Consort-villas, Clewer.

August 22 and 23. — Shropshire B.K.A. Annual show in connection with the Horticultural Society's great fête in "The Quarry," Shrewsbury. £35 in prizes for bees, honey, hives, and appliances. For prize-lists, &c., apply T. Whittingham, Upton Magina, near Shrewsbury.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

August 29 and 30.—Staffs. B.K.A. At Stone. In connection with the Staffs Agricultural Society's meeting. Nineteen classes for bees, hives, honey, &c. Entries close August 4. Schedules from Harold Twentyman, Wolverhampton.

September 4 and 5.—At Coventry. In connection with the Warwickshire Agricultural Show. Annual show of the Warwickshire B.K.A. Liberal prizes for honey, bees, and appliances. For schedules apply J. N. Bower, hon. sec., Knowle.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries close September 11. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

Shows have been arranged in connection with the Lincolnshire Bee-keepers' Association as follows :—July 26th, Wragby, and Swinderby ; 31st, Heckington, Morton (Bourne) ; August 1st, Blankney, Sutton Bridge, and East Stockwith ; 2nd, Stickney ; 6th, Eltham ; 16th, Mablethorpe.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

E. C. R. White.—Queen sent is an adult, and has no appearance of old age about her ; but it is impossible for any one to even guess with any degree of certainty as to age of dead queens by their appearance.

W. Perkins (Wickwar).—Bees sent (hybrid ligurians) are usually good honey-gatherers; but as to viciousness, they vary, some being troublesome, while others are quiet. A few weeks' experience will test them in this respect.

J. Ewen (Ash).—Having had no practical experience with the particular form of double-queen hive referred to, we are not in a good position to advise as to the defects named. Our correspondent should refer his question to the maker of the hive, and get his explanation of the weak point mentioned.

Wm. Greener.—*Absconding Swarms.*—1. It occasionally happens that the runaways become scattered and the bulk of the bees lost through mishaps, but they usually have a place sought out before swarming. They often travel so far as a mile away. 2. If freed from bees, the sections may be put on any stock for completing.

A. G. M. (Devon).—1. Bee is a queen. 2. No bee we know of has "a red stripe." 3. Bees are more or less agitated till her return. 4. Not necessarily so, but drones are tolerated so long as there is no breeding in the hive.

J. Fielding-Smyth (Co. Down). — *Drone Comb for Sections.*—If comb is clean and perfectly white it will do equally well as worker comb.

Beginner (Shortlands, Kent).—It is generally understood in Kent that the honey flow stops when the limes have bloomed, *i.e.*, about end of second week in July.

John C. Waltham (S.W.).—A stock so small as to be reduced to three frames will be difficult to start comb-building at this season, but in any case they are not likely to build drone comb as feared.

T. C. Porter (Alford).—Combs containing brood should never be put through the extractor. With supers above we should defer extracting till the latter are removed, and then only extract from such combs as are broodless.

Pressure on our space again compels us to hold over several articles till next week, including "Useful Hints."

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence ; for every additional Three words or under, One Penny.

FOR SALE, Several STOCKS and SWARMS in skeps. What offers? Miss Cooke, High House, Litcham, Norfolk. E 51

SECTION CANS, for Exhibition, glassed both sides, 18s. per gross ; 1s. 9d. per doz. J. S. Greenhill, 80, Graham-road, Wimbledon.

STRONG Stocks of BEES, in Standard Bar-frame Hives, 33s. carriage paid. Also young laying QUEENS, 3s. 6d. each. William H. Bulcock, Rivers dale House, Clitheroe. E 50

FRAME HIVES (SPECIAL VALUE).—Eighteen New Double-walled, thoroughly substantial HIVES ; take 13 frames on metal runners ; floor, body, super, roof, nailed together, 11s. 6d. ; in flat, 8s. 11d. ; body, floor, and roof only, 6s. 11d., packed free. E. Bunney. Swansea. E 48

FOR SALE, a limited number of DRIVEN BEES, headed with 1894 queens, for delivery in August and September, 1s. 6d. per lb. Orders executed in rotation. C. Haynes, Hanley Castle, Worcester. E 52

FOR SALE, Nine STOCKS of BEES in Standard Frame Hives ; wired frames, two crates, sections in full work on each. In perfect condition. May stand until end of season. Offers to S. Turner, Docker's-lane, Berkswell, Warwickshire. E 47

(See over.)

Prepaid Advertisements *(Continued)*

WANTED, a SAFETY BICYCLE, in EXCHANGE for Modern Hives and Appliances. G. DALE, Little Haywood, Stafford. E 49

WANTED, in September, a few good 1894 HYBRID QUEENS. Lowest price to ERNEST E. DAVIS, Great Bookham, Surrey. E 53

WANTED, Two Strong SWARMS of BEES, just out. EXCHANGE good Honey Extractor. WILLIAM PARSONS, Esq., Ashurst-place, Langton, Tunbridge Wells.

NEW HONEY in SECTIONS WANTED. Best quality only taken. Cash. T. SMITH & Co., 17, Cambridge-street, Hyde Park, London. E 40

HONEY.—To INCREASE DEMAND, use my Recipes with each jar. Print your name on them. Six, 1½d.; 100, 1s. 6d.; 500, 6s.; 1,000, 10s.
WANTED, good CLOVER HONEY. Sample, &c.
GEO. STOCKS, Sandiway, Northwich. E 41

MARKET for SECTIONS (any quantity), Run HONEY and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

PURE ENGLISH BEES, splendid strain. Swarms with Queen, suitable for building up, 5s., Queens, 3s., on rail. Swarm Boxes 2s. 6d., Queen Boxes 1s., unless returned. ALSFORD, Expert, Blandford. E 38

HONEY.—Finest White Clover and Heather HONEY WANTED. Post samples and lowest prices, stating quantities. SPRING, Brigg, Lincs.

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

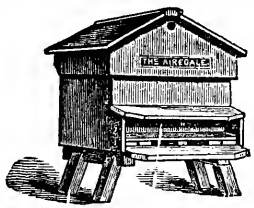
CHOICE YOUNG QUEENS, excellent strain, produced by seven years' careful breeding, guaranteed fertile, post free 5s., virgins, 2s. 6d. Rev. C. BREERETON, Pulborough, Sussex. 229

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

BEEKEEPERS in LANCASHIRE and CHESHIRE and surrounding Districts please note that the
CENTRAL SUPPLY STORES
for all BEEKEEPERS' REQUISITES is in LIVERPOOL at the OLD SPOT, 50, GREAT CHARLOTTE STREET. GEORGE ROSE, successor to P. HARBORDT.
Why pay carriage from long distances when you can buy cheaper and quite as good quality locally, and have your orders promptly attended to? Catalogues gratis. Send now. 14 varieties of Bee Flowers (full directions to each). 1s. Cash with order. 201

MOST IMPORTANT
SUBSTANTIAL BEE HIVES,
12 frames 10/6 (all double walls on legs), 16 frames 15/-
These are rare value for money.
SUPERIOR COMB FOUNDATION, SECTIONS, &c.
Swarm Preventing, Artificial Swarming, Feeding, Transferring from Skeps, all Post Free 3d.
W. RUSHTON, Hive Factory, Bedford.

THE "WELLS SYSTEM"
Described by the Originator,
GEORGE WELLS,
AYLESFORD, KENT.
Price 6½d. Post Free.
To be had of the Author only. 206



THE YORKSHIRE
Bee-keepers' Supplies
WILLIAM DIXON,
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Hives, Extractors, Smokers, Feeders Foundation, &c.
Prizes Awarded, Gold, Silver, & Bronze Medals.

W. P. MEADOWS,
Syston, Leicester.
Unprecedented Success, ROYAL SHOW, Cambridge, 1894.
1st Prize—Collection of Appliances.
1st & 2nd Prize—Extractors.
1st Prize—Best Frame Hive.
1st ,, Best Cottager's Hive.
1st ,, Best Smoker.
1st ,, Best Feeder.
1st ,, Best Collection of Honey.
B. B. K. A. Medal Super Clearer.
Send for Cat—a—Log with Leaflet.

If you want to handle your Bees with COMFORT, and not get STUNG,
TRY APIFUGE
Numerous Unsolicited Testimonials.
To be had of all Appliance Makers and
DARCY GRIMSHAW, HORSFORTH, LEEDS.
Price 1s. and 2s. post free.
Cash must accompany Order.

SHROPSHIRE BEE-KEEPERS' ASSOCIATION.
THE ANNUAL EXHIBITION
—OF—
BEES, HONEY, HIVES, AND APPLIANCES,
Will be held in
THE QUARRY, SHREWSBURY,
in conjunction with the
HORTICULTURAL SOCIETY'S GREAT FÊTE,
On **Wednesday** and **Thursday, Aug. 22nd & 23rd.**
PRIZES to the Value of £35 will be awarded
For Prize Lists, Entry Forms, and Information, apply to T. WHITTINGHAM,
UPTON MAGNA, near SHREWSBURY.

SPECIAL NOTICE TO IRISH BEE-KEEPERS.
Mr. KIRWAN'S Article has caused him to receive a great number of letters asking who makes the special Sections that he has been so successful with.
They are the **PATENT GROOVED SECTIONS** made by **Thomas B. Blow, Welwyn, Herts.**
Illustrated Catalogue giving full details of these Sections will be sent gratis and post free on application.

COMB HONEY IN SECTIONS.
During the past winter I have purchased between two and three tons of the above. It has been bought indiscriminately from the Bee-Keepers of Great Britain and Ireland. I hope to require five tons during the coming autumn and winter, and shall purchase by preference from those Bee-Keepers who are among my customers for appliances. Special arrangements can be made to take the whole Comb Honey product of large apiaries, and special prices can be given for the Honey where part payment is taken in appliances. Spring crates are lent free to ensure safe transit by rail. Any quantity of English Bees-Wax can also be purchased.
THOMAS B. BLOW,
Manufacturer of Bee-Keeping Appliances,
WELWYN, HERTS. 200

Editorial, Notices, &c.

USEFUL HINTS.

Weather.—"Generally unsettled" is the very appropriate Press term employed just now with reference to the weather, Southern bee-keepers meantime being kept on the tenter-hooks of uncertainty as to the ultimate result of the "lime" harvest — now their only hope for the year. It fortunately happens that the lime, though a precarious and uncertain source of supply at the best, is less subject to vicissitudes from rain than are many others of our honey-yielding plants. Given warmth, with an absence of cold winds, and bees will gather freely and abundantly from the lime-bloom, even in the midst of a drizzling rain. Besides, during the season when the limes are at their best the little labourers will be found hard at work on a warm but dull and sunless morning by 5 a.m., and will not have ceased their busy hum—which causes a good lime in full bloom to give forth a sound like that of the fly-wheel of an engine at work—at 7 or 8 p.m.

All this contributes to the hope that the next few days will see the completion of some sections and combs for extracting—now sadly needing "finishing off"—in spite of the frequent showers so prevalent of late. It should, however, not be forgotten how necessary is warmth and cosiness to the bees working in supers while there continues to be so great a difference between day and night temperatures. With only a week or ten days to finish off in—for this is as long as the lime bloom lasts—every day is of consequence, and cold supers, or too much surplus room, will tend to lessen the ingathering not a little in weather like the present. The trees in our district are getting past their full bloom as we write; the foliage is beautifully clean through the heavy rains, consequently there is no sign of honey-dew, and a sample of really good lime honey should be secured, but it must be got quickly if at all; this is why warmth is needed in supers in order to keep the bees in them sealing over the honey when gathered, and making it ready for prompt removal when the season is really at an end.

It looks very much as if Southern bee-keepers are destined to again take a back place so far as honey results in 1894. If reports are to be relied on the North will yield a far better average than we of the South can hope for, but we must avoid grumbling; there is still the second crop of clover to come, and the rain has helped it forward finely since the hay was got in. This will add to the crop North and South, especially so if the late or fall season should turn out so good as in 1893.

Renewing Queens.—A good number of our readers seem to be intent on requeening their stocks in the coming autumn, judging that a change of queens is needed, because of so many hives having failed to swarm at all in 1893. They think that in consequence of the present queens being so old and worn out this year they will be quite unfit for further use at its close. This resolution is, in some cases, arrived at, notwithstanding that the condemned queens have proved eminently satisfactory in every way during the season now ending. Experienced hands, however, know well how unreliable is the mere fact of a stock not swarming in determining the age of queens, and that old queens are deposed and replaced by young ones—more often than is supposed—without any outward sign of the change being visible to an unobservant bee-keeper.

In this connection the want of practical experience has also this year led to misconception regarding swarms, it being argued that second swarms frequently come off in a couple or three days after the first swarm has issued. Such, however, is very rarely the case, but what has been a matter of rather frequent occurrence this year — owing to the peculiar weather and other conditions—is that stocks have made preparation for swarming, and, having been "put off" for several days, have "balled" and killed the old queen, leaving the "top swarm" to issue with a just recently hatched queen at its head. When this occurs, the second swarm is, of course, "due" in a day or two, and comes off accordingly, followed, maybe, by a third, and so on.

We never forget the adage "bees do nothing invariably," but it may be safely taken as a rule that top swarms are

headed by the old queen, and that after-swarms are due about the eighth or ninth day afterwards.

BRITISH BEE-KEEPERS' ASSOCIATION.

Arrangements have been made for holding an examination of candidates desirous of competing for third-class certificates at Shrewsbury, on Thursday, August 23. Particulars may be obtained of the secretary, John Huckle, King's Langley, Herts.

LINCOLNSHIRE AGRICULTURAL SOCIETY.

HONEY SHOW AT GRIMSBY.

This large and evidently popular show was held at Grimsby on the 18th, 19th, and 20th inst., and included, as usual, amongst its attractions a very creditable display of honey and appliances, as well as lectures and manipulations with bees in the tent of the Lincolnshire B.K.A. There were sixty-six entries in the various classes, and although a special class was on this occasion provided for cottagers (entry free), and for six 1 lb. bottles of run honey, one exhibitor only entered. This should be taken careful note of by those who appear so anxious regarding the welfare of the cottager. For the silver medal offered by the B.B.K.A. "for the best exhibit of comb and extracted honey" there were four competitors, the winning stand being an excellent collection of honey in standard and shallow frames, sections, and extracted in bottles, tastefully arranged, the honey being of excellent quality in colour, flavour, and density. The same exhibitor obtaining the silver medal of the L.B.K.A. for extracted honey in another class. There was a fair exhibit in the class for twelve sections, and twenty entries in the class for extracted honey of 1894, some very excellent clover honies of remarkable consistency being shown. In the appliance classes, W. P. Meadows and Chas. Redshaw, both of Leicester, made another attempt to surpass themselves with collections of the various appliances and hives, which in material, workmauship, design, and price other manufacturers might well emulate to produce as being "worthy of their steel."

Mr. W. C. Brown, of Appleby, was the steward of this department, and the exhibits were judged by Mr. F. J. Cribb, of Morton, Gainsbro'. The awards were as follows :—

Best Exhibit of Comb and Extracted Honey.—1st, A. Weatherhogg, Willoughton ; 2nd, R. Godson, Alford ; 3rd, D. Seamer, Grimsby.

Best Twelve Sections.—1st, R. Godson, Alford ; 2nd, Miss B. Kirk, Grimsby ; 3rd, D. Seamer ; 4th, T. Coates, Grimsby.

Best 12 1-lb. bottles Extracted Honey.—1st, Miss Ethel Chester, Melton Mowbray ; 2nd, A. Weatherhogg ; 3rd J. Herbert, Barton-on-Humber ; 4th, G. Catley, Hull ; h.c., T. Coates, Grimsby.

Best 6 lb. of Run Honey (Cottagers only).—1st, F. Davy, Leybourne.

Best 3 lb. of Bees-wax.—1st, J. Herbert, 2nd, T. Sells, Uffington.

Best Observatory Hive Stocked with Bees and Queen.—1st, D. Seamer ; 2nd, R. Godson.

Best Collection of Bee Appliances.—1st, Chas. Redshaw, South Wigston ; 2nd, W. P. Meadows, Syston.

Best Rapid Feeder.—1st, W. P. Meadows ; 2nd, C. Redshaw.

Best and Most Complete Hive for General Use.—1st, W. P. Meadows ; 2nd, C. Redshaw ; 3rd, W. P. Meadows ; h.c., C. Redshaw.

For the Best Hive, price not to Exceed 12s. 6d.—1st, 2nd, and 3rd C. Redshaw.

Best Honey Extractor.—1st and 2nd, W. P Meadows.

Best Pair of Section Racks.—1st, C. Redshaw ; 2nd, W. P. Meadows.

Lectures in the bee-tent were given at intervals by Mr. R. Green, of Rainham, Kent to large and appreciative audiences.—*Communicated.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

"WELLS" *V.* "W.B.C." HIVES.

A SEASON OF OVER-SWARMING.

[2023.] The season of 1894 has been fraught with disappointments. During my short experience—five years—I have never seen my stocks in such good form as they were in April. Then, alas! came the change in weather, and feeding-bottles had to take the place of supers. My strongest stocks were those (or that ?) in a "Wells" dummied hive of twenty frames, and one in a "W.B.C." wintered on twenty standard frames. I had hoped to have compared the two systems, but the bees have settled it otherwise. During the ungenial weather, the "W.B.C." held a slight advantage, as the "Wells" had to be fed.

My first swarm came off at an out-apiary on May 6, a mile from home, and clustered on a chimney. The man in charge lit his

fire, and off went the bees to be seen no more. On May 13 I saw sainfoin and white clover in bloom, and a farmer told me that he had a field of the latter, well out, about a mile from my hives, but with the exception of an occasional "by" day, the weather kept the bees at home, and in the meantime most of the sainfoin was cut, but not carried for weeks on account of the weather. On June 3, the "Wells" hive swarmed and united with a swarm from the next hive. I took half the brood and all queen-cells away, filled up with full sheets, and returned swarm, giving a super of narrow frames with starters, under the "W.B.C." section crate.

On June 8 the swarm came out again, so I hived on a new stand. On June 9, whilst I was away fishing, the "W. B. C." swarmed (a cast, as I found on examination, the top swarm having "vamoosed" when I was away), and evidently feeling that the "Wells" bees were in rivalry with it, the swarm entered the hive occupied by the "Wells" swarm. A battle-royal ensued which lasted till next morning—for I did not reach home till past 10 p.m.—when I floured the whole lot, and so restored peace, but not before thousands had been slain, and the stock much weakened. On June 11 the "W.B.C." threw another cast, which I returned. On the 16th the cast came out again, and joined a cast from another hive. I put them both into the "W.B.C.," using flour to unite, and they have worked well since, filling the standard and two shallow bodies. The "Wells" swarm threw a "maiden," which was lost, and then a cast, which I returned, finding no less than *fifteen* slain queens thrown out next morning. It cast yet again, this being returned, and eventually it repeated the performance a third time, the cast getting clean away without having stored 20 lb. of super honey.

All my hives but three have behaved in much the same way, those swarms hived in May having swarmed again and cast till I was sick of returning the casts, and I don't think I shall gather 500 lb. of honey from fourteen hives, though last year I got 900 lb. from ten, spring count. One consolation is that all the hives but three have young queens. I have tried the shallow frames with 1⅛ in. bottom bars, eight to a ten-frame body, with side slips, and I like them. The combs are more evenly built than in the ordinary shallow frame with wide ends, and are certainly more handsome in appearance. I got five sets of these frames, and only wish that all my extracting bodies were fitted with them. I hoped to have had some for show at Cambridge; but though they were filled the sealing was not completed. I also had the misfortune to have one of these bodies stolen, amongst other things, from my honey-room one fine night.

As a consolation to "a poor young bee-keeper," I may say that though a "duffer" at bee-keeping, I had at the end of last season paid for all my bees and plant, and found myself in possession of fourteen stocks, and had £14 in hand. This is a good neighbourhood to gather honey in, but very bad for selling, 8d. per lb. being the highest I have ever got for honey in bulk. I am heavily handicapped by the position of my hives. A double row of large elms grow fifteen yards behind them, and the swarms love clustering in the highest branches. (Often they are not seen—I only secured one top swarm from ten hives last season!) My plan is to "swarm" up the tree myself, taking a long rope and a saw, pass the rope over a higher branch, make it fast to the branch on which the bees are clustered, saw it off, lower bees and all till near the ground, then shake into a skep in the ordinary way.—H. C. H., *Longparish, Hants July* 17.

SHALLOW FRAMES.

[2024.] Mr. Woodley, in his remarks (2008, p. 273) on the experience related in "Useful Hints" of July 5, asks for information by tests as to best width for wide-spaced shallow frames. I therefore give the result of an experience which occurred under somewhat similar circumstances to those you describe, and from which I think a clear deduction can be drawn.

A box of seven shallow-frames spaced by the wide tin ends at 1⅞ in., was worked out quicker than I was aware of, and a second box not being ready, and the bees evidently crowded, I placed above it a box of hanging sections which was ready for another hive, just to give room temporarily. In twenty-four hours this box was taken off, and another shallow-frame box placed under the first. Now, in taking it off, I found that from four of the seven shallow frames the combs had been extended upwards and attached to the wide bottom bars of the hanging section frames, not quite completely in so short a time, but evidently the bees' intention was to enclose the shallow frame top bars, and, doubtless, if the upper frames had been ordinary frames, with narrow bottom bars and the box left on, the combs in the two boxes would have been joined up into single combs. But the remaining three frames were entirely free from any building up of comb, and the reason of this is clear and striking, namely, that the width of the top bars of these three frames was 1⅜ in., thus nearly covering the wide combs, whereas the other four frames were of the standard width of ⅞ in., the combs in their case, of course, projecting well beyond the sides of the top bars.

I placed the two widths of frames in the same box expressly for the purpose of experiment, the wide ones being together at one end of the box, and the narrow ones at the other, and all at 1⅞ in. spacing; and I have other boxes under similar conditions, but do not yet know the result.

My own preference is strongly in favour of

wide frames for wide combs, but as a novice I felt bound to give narrow frames a trial under the different opinions expressed when the question was dealt with at the meeting of the B.B.K. Association, though I don't rightly understand the difficulty suggested in uncapping and extracting wide frames so long as the frame is not wider than the comb. My wide frames have top bars and sides $1\frac{3}{8}$ in. $\times \frac{3}{8}$ in., and bottom bars $\frac{7}{8}$ in. $\times \frac{1}{8}$ in., which make an excellent and strong frame for a 5-lb. comb, and one which, from its wide bearings, goes together very true and firm.

A disadvantage to some may be that for wide frames split top bars are hardly possible, the width preventing sufficient spring probably for opening sufficiently. But with the several excellent methods of top-bar fastening—Abbott's among them—or the good old method of groove and waxing, the split bar is no loss with its several disadvantages. If the bees draw out the wide-spaced combs fully, and make out that allowing $\frac{3}{8}$ in. space between them for two layers of bees, the width of combs will be over $1\frac{5}{8}$ in. ($1\frac{11}{16}$ in.), which would make a $1\frac{1}{2}$-in. wide bar better than $1\frac{3}{8}$ in.

Will Mr. Woodley say whether he thinks that the width and thickness of bottom bar affect the matter much if the top bars of lower frames are wide enough to cover the combs?

What a fine show these wide combs make! Thanks for the wide tin ends.—F. S., A Lancashire Novice, *July* 17.

TAKING BEES TO HEATHER.

[2025. I should like to have the opinion of experienced bee-keepers on the following matters:—I purpose sending my hives to the moors, two miles away, at the end of July—they are to be placed under the care of a farmer. As I shall not be at hand to regulate the closing or opening of the sliding doors of my hives, I think of removing them altogether, and replacing them with strips of perforated zinc $1\frac{1}{2}$ by 18 in. long, securely nailed on. The zinc has holes in it the size of a bee's head, and I thought of cutting an entrance in the middle of each piece of zinc about one-third of an inch high by $1\frac{1}{2}$ in. long. The bees could then pass in and out of their hives, while they would not have too large an entrance to guard against wasps and robber bees. There would also be plenty of ventilation. Would there be any objection to this? I cannot help thinking this might be a good way of giving free ventilation to all hives during hot weather.

A July swarm I purchased last year (hybrid Ligurian) threw off three good-sized swarms this spring, each of which I have placed in a separate hive, and the old stock is strong and doing well, though it was only an ordinary-sized stock to commence with. I left it entirely alone till February 26, then began giving it and others pea flour in small shallow tins on the floor-boards, as well as barley sugar and syrup above. On looking into it during the first week in May I found there were still three frames of foundation—out of ten given—unworked, and yet the swarms were thrown on May 25 and 30 and June 3, and all doing exceedingly well; quite as well as most of the eighteen swarms I have just bought. Is this owing to early feeding combined with Ligurian strain?

I have hit upon a very quick and effectual way of filling sections with comb foundation. I have a small "Astral" paraffin stove on the table beside me, and on it I heat an "oyster opener" over the flame. The stove being flat at the top the knife can be left there when not in use, so as to heat in readiness. I then place fifteen sheets or so of comb foundation in a heap on a board, and cut it straight through with the hot knife to the required size. I call it a knife, for it is very much like one, being quite flat, but rather narrower at the point and well rounded. This implement also does admirably for pressing down the foundation in the sections and melting it at the same time. I get a folded section, and, taking a piece of foundation in my left hand, hold one end of it over the stove till it melts, at the same time holding the knife over the flame also. Then I quickly place the melted part where it should be in the section and pass the heated knife along the side that has to be pressed down. This has the effect of making the foundation very secure, and the process is a quick one.

In answer to my last communication (1,046, p. 206) you thought fit to advise me to "carefully read up a good book on bees before entering upon the management of so many as twenty stocks." I had before then already read seven of the best books published on the subject, amongst which (I trust you will consider this an encouraging compliment) was Cowan's Guide Book.—Annoné, *Derbyshire.*

DECAMPING SWARMS.

[2026.] May I ask you for your wise counsel, as I am quite a novice, but anxious to become an expert. I have for some months taken in your valuable journal, and have learned a little of my ignorance, which I hope may in due course vanish.

A friend presented me with a large hive of Ligurian bees last October. I brought them safely over from Paisley, N.B., to the "Green Isle," which proceedings they apparently did not demur to, and seemed to enjoy the long sea trip. On May 10 I had a swarm, secured same in a skep, and I in the evening smoked them down into a frame hive provided with seven frames of foundation. Four days later another swarm issued, which I treated exactly the same. On the 18th still another swarm, but not having a hive ready I determined to try and secure the queen, and put them into my first swarm, which were apparently doing well. I dusted the swarm with flour, also having shaken some flour down the sides of the frames into the hive of which it was my

intention they should go, but "the best-laid schemes of mice and men gang aft agley." I watched for the queen, but my inexperienced eye could not detect her; most of the swarm returned to the old hive, but a considerable number went into the new. All went "merry as a marriage bell" till yesterday. In the meantime I had fed with syrup every day for a fortnight, till June 14, the two new hives till all the frames were covered with bees and comb; then I put on the sections. Observing that the sections were filled with bees, I yesterday sought for the honey, but when I drove the bees down by using a cloth saturated in carbolic acid, I found every section filled with comb; two nearly filled with honey, but not quite sealed. On going to the other new hive I found the bees had swarmed, and had left the sections, although each of the boxes were filled with beautiful white comb. Can you tell me what is the reason, "and will they ne'er come back again." A friend told me he saw a swarm in a garden close by, but I could find no trace of them. I feel, as they say in America, "Away back."—T. R. WARNER, *Rathmines, Dublin, July* 6.

[It is quite impossible to account for swarms decamping at times, but there is a strong probability in this case that the mishap has occurred through adding the cast to the hive from which the bees decamped.—EDS.]

FORCING BEES TO SWARM.

NOTHING NEW IN IT.

[2027.] In March number of the American *Bee Journal* for 1872 (page 200), in an article by that veteran bee-keeper, Elisha Gallup, is an article on the twin-hive as a non-swarmer. I just copy a bit from same article, in order to show "Fumigator" that his is not an original idea, but was practised more than twenty years ago. Mr. Gallup says:—"Still there was no disposition to swarm, so we inserted a comb, containing a sealed and nearly mature queen-cell, and the following day out came the largest swarm we ever saw.

"Right here we will state that we have repeatedly brought out swarms by the above method of inserting queen-cells. It order to succeed, it must be done at a time when the hive is populous with bees and brood, and the bees must be gathering forage rapidly."

So you see, Mr. Editor, there is "nothing new under the sun."—JOHN WALTON, *Honey Cott, Weston, July* 21.

A HOPEFUL REPORT.

[2028.] Never in the annals of bee-keeping has a more complete transformation-scene been effected than during the first fortnight in July, 1894. From starvation to the land of plenty was but a "turn," but how anxiously it must have been looked for both by the bees and their owners, who, by the way, may take another lesson from the fact to make the most of opportunity when it does come. Bees have been working vigorously, and are still pouring in honey to complete and seal over the promising supers. On the 12th inst. I took eight shallow frames from one stock, all beautifully sealed, yielding about 30 lb. of honey, leaving two behind not quite sealed sufficiently for removal. The same stock is refilling the same combs. Fine weather is all that is needed here to make this quite an average season. Several hives give promise of from 50 lb. to 60 lb. of honey, all gathered in little over a fortnight.—E. BUNNEY, *West Glamorgan, July* 16.

A RE-START WITH BEES.

MY BEES AND MY PIPE.

[2029.] I have this summer re-started bee-keeping by purchasing a swarm from a neighbour on June 16. The swarm first issued some days previously, but on that occasion returned to the parent hive. Being a joiner by trade, I had made a good "Cowan" hive, frames included; fitted them with "W. B. C." ends on metal runners, and they work to perfection. I hived my swarm on six frames fitted with full sheets of foundation, wired. I fed swarm for a week, then examined, and found combs being worked out nicely. On June 30 bees had nearly completed all the six combs, while there was a patch of white larvæ size of palm of the hand, and a little honey in combs. To-day (July 9) there is a nice lot of brood, but not much honey, so I have started feeding again.

I had bees in two frame hives and a skep twelve years ago, when B.J. changed hands, but sold out on leaving home, and on taking up the JOURNAL again, eighteen months ago, to read up latest wrinkles on bees, the desire to start again became so strong on me in July, 1893, that I said I would give up my pipe for twelve months, and buy bees, &c., with the money saved, so that I could say my bees came out of my pipe, while hoping they would not "end in smoke." Well, I have now got them, and this week the twelve months' abstinence from smoking ends, so I have a ½ lb. of "weed" on order to start level.

I want to ask—1. If I continue to feed the bees slowly till they cover the six frames well with bees and brood, can I artificially swarm them early in August? I would then purchase a fertile queen to give to swarmed stock, feed both lots till they have enough brood and food to fill six frames in each hive, and so have two stocks to come out in spring, instead of one only, as at present. I shall get no honey this year, so want to increase stock if possible by continuous feeding.

2. Are the ounces mentioned in various recipes in "Guide Book" avoirdupois weight, 16 to the lb.? 3. How long should a queen be caged when giving her to swarmed stock?—BUZZING, *Addlestone, July* 9.

[1. From details given, it is certain that the

swarm is headed by a young queen not arrived at her greatest fecundity. This being so, we should not advise dividing the stock in August, unless it can be worked up to ten frames before division takes places. Remember one good stock is better than two poor ones. We think that better results would follow if a trifle extra cost was incurred in buying a second swarm, not strong enough to winter unfed, and building it up for winter in the second frame hive. 2. For drugs, chemicals, &c., apothecaries' weight (12 oz. 1 lb.) is used. Otherwise 16 oz. 3. From thirty-six to forty-eight hours.—EDS.]

OWNERSHIP OF SWARM.

[2030.] A few weeks ago a hive of mine swarmed, and the swarm took flight and left my garden; my wife followed them for about a quarter of a mile, when they came to a garden having an unused hive in it, here the bees took possession. I went to the owner of the hive, and asked him for the swarm, but he declined to give them up; he offers me 2s. 6d. for them. I told him they were well worth 10s. 6d., but as they were in his hive he might have them for 7s. 6d.; he now offers me 3s. 6d. His neighbour tells me he has already taken about 12 lb. of honey from them. I am only a working man, and cannot afford to lose them. Can he lawfully detain them? If not, what steps should I now take to get them back? If I summon him in a County-court, do you think I should get the decision of the judge in my favour?—ARTHUR J. SMYTH, for J. C.

P.S.—I do not want to sell them. I only offered the swarm for 7s. 6d. to get the matter settled.

[If your wife saw the swarm issue, and never lost sight of the bees till they entered the vacant hive of your neighbour, you have a good case for the County-court. It would be well, however, to read the case quoted fully in our monthly, the RECORD, for June last, which can be had by post for 2½d. in stamps. —EDS.]

MY EXPERIENCE WITH WIDE FRAMES.

[2031.] I have all my surplus frames, both standard and shallow size, made with top bars 1½ in. wide, sides the same, and a bottom bar ⅞ of an inch wide. Where I spaced them about ¾ in. apart, the combs were worked out very nicely, some few of these being joined together (where they were tiered up) from the bottom bar to the top side of the frame in box underneath. I had not put pieces of old excluder on top of the frames of the bottom box, as I usually do, as I have found by that means it stops the bees from joining them together, but where I put one frame of comb less in a box, making them from ⅝ to ¾ inch apart, the bees joined them at bottom, and in many cases built pieces of comb in between, which made it rather messy in taking them out. If all is well, I shall not forget the excluder to lay on frames to stop the joining together. I had pieces of combs built all the way down from frames of full standard size.

I do not use any metal ends, nor do I find the bees lodge up among the ends of the frames very much. I have the ends notched out to ⅞ in., which make them very convenient to handle.—JOHN WALTON, *Honey Cott, Weston, Leamington, July* 21.

PHENOL AND PHENYLE.

[2032.] Referring to pages 164-5 of the "British Bee-Keeper's Guide Book," will you kindly inform me what is the difference between phenol and phenyle? Is the "pure phenol in crystals" identical with Calvert's No. 2 medical carbolic acid, phenol C_6H_6O? —H. O. W., *Budleigh, Salterton, July* 16.

[The difference consists in *Phenyle* being entirely non-corrosive and non-poisonous as regards human beings and other animals, although destructive of insects when administered in large doses. Even in concentrated form it is not injurious to human beings, but *Phenol* is well known to be extremely corrosive and poisonous, hence we recommend phenyle in preference, more especially as the disinfecting properties of the one are fully equal to those of the other, when used in equal quantities. Phenyle mixes with water in any proportion, and this is why it is called *soluble*. The "pure phenol in crystals" mentioned on p. 164 is same as *No.* 1 *Carbolic Acid*.—EDS.]

QUEEN RAISING.

AN AMATEUR'S EXPERIENCE.

[2033.] Following your instructions as to queen raising, I placed a frame of drone comb in a strong stock, and when drones were flying freely I removed all unsealed brood, took a frame with larvæ three days old, cut the comb in two parts, cut V-shapes, and broke down cells, destroying the young as per Alley; five days after they had three sealed queen-cells, the bees taking down 2 lb. of syrup each day. On the twelfth day from the laying of eggs I divided the combs into three lots, giving each a queen-cell; one lot deserted the next day and went into the nucleus about a yard away. Then came a fortnight's cold frosty weather and on looking into nucleus No. 2 found they had deserted, and from the dead around soon located their retreat into a small skep which was very strong before. The stock raised a fine queen, which I had the pleasure of seeing mated on the seventeenth day from leaving the cell, and gave them a frame of brood from the removed portion; it is doing well. Will some one tell me where I was wrong in forming nuclei, was it for want of warmth through the cold weather coming back? or was my method wrong in forming them? I thought queenless bees would stop

where put. I mean to try again next month. If some friend will give me a wrinkle I shall esteem it a great favour, and it might be helpful to others like myself trying to make headway.—C. HARVEY, *Bromsgrove.*

WEATHER REPORT FOR JUNE, 1894.

WESTBOURNE, Sussex, June, 1894.

Rainfall, 1·75 in.	Brightest Day, 29th, 15·20 hours.
Heaviest fall, ·37 in. on 6th.	Sunless Days, 3.
Rain fell on 13 days.	Below average, ·37 hrs.
Above average, ·12 in.	Mn. Maximum, 62·7°.
Max. Temperature, 82° on 30th.	Mn. Minimum, 49·8°.
Min. Temperature, 41° on 1st.	Mean Temperature, 56·2°.
Minimum on Grass, 32° on 14th.	Maximum Barometer, 30·62° on 30th.
Frosty Nights, —	Minimum Barometer, 29·81° on 2nd.
Sunshine, 177·3 hours.	

L. B. BIRKETT.

Queries and Replies.

[1111.] *Renewing Queens.*—1. When it is necessary to remove an old queen and place a younger in her stead. 2. What is the best method of doing so? Last year I caught the old queen by shaking the bees on a quilt some distance from the hive, and while the bees were on the wing back to the hive I introduced the nucleus stock. In some cases the queen was not accepted. 3. Was it because the bees had not time to realise their loss? 4. I suppose any time after July would do for the purpose.—INQUIRER.

REPLY.—1. When the "old queen" begins to fail in prolificness. 2. After her removal, the young one may be introduced, either by the "direct" method or by caging for forty-eight hours. It is merely a matter of opinion which is best. 3. It was because your plan of re-queening is not a good one. The old queen should have been removed from the comb quietly, and the nucleus colony added after queen-cells were started. 4. So long as queens in nuclei are fertilised and laying, they may be added to queenless stocks any time during the autumn.

[1112.] *Melting very Old Combs for Wax.*—When brood combs are old and black, is it worth the while to melt them down for wax? If so, what is the best method where no wax-extractor or special appliance is used? I have sometimes thought so very little wax seemed to come from these combs it would almost be better to destroy them.—INQUIRER, *Westmoreland.*

REPLY.—When combs have become old and black, they are not worth melting for wax. They consist of little beyond the cocoons or skins of successive generations of bees which have been bred in them.

[1113.] *Moving Bees from Church Roof.—Using Cyanide of Potassium.*—In a church roof, within two miles of this house, there has existed for about five years a very strong stock of bees. It has now become imperatively necessary to remove them, as they will let no repairs, &c., be carried out. I have sought the advice of an experienced brother bee-keeper, and he tells me it is impossible to get both bees and honey out at the same time, as the high road is within 10 yards of the nest, and along it there is a constant traffic. Besides this, the bees have to be removed immediately, or else I would fix a hive as near nest as possible, and tie in combs with brood on from the nest, with the bees attached. In consequence of this, I propose to go at about eight o'clock one night and bore two or three holes in the back of roof, place inside two or three spoonfuls of cyanide of potassium, and stop up both holes and entrance. In the morning I expect to find all bees dead! What I wish to know is, Will the cyanide injure the honey, and make it poisonous? If so, can you tell me what to use instead? Also the best method of procedure? It sounds barbarous, indeed, to have to destroy a fine stock of bees in the old-fashioned way, but it must be done, and that at once.—F. R. KENT, *Ipswich.*

REPLY.—Cyanide of potassium is so highly dangerous a substance to use—besides being very poisonous—that we should not employ it in removing the bees. They might be easily rendered perfectly harmless for a time if subjected to the fumes of chloroform, and, after removal, could be utilised. If the operation was begun at 5 a.m., and judiciously got through, the bees and combs could be removed while in a state of semi-torpor, without any risk to passers-by. As to "the best method of proceeding," it is impossible to advise on this point without having seen the place and its surroundings.

Echoes from the Hives.

East Fife, N.B., July 21.—My stocks, though storified, have mostly swarmed, and swarms been returned. Much rain and thunder for the last ten days, which has stopped honey storing a good deal. Clover very abundant here; if weather becomes dry and warm it should yield well.—ANDREW MANN.

Hemingford Grey, July 21.—I expect the season is over with us, and is very far from being a good one. The bees have commenced killing off the drones. We have had an abundance of lime bloom, and the bees seemed to work it well, but have not stored much of it in the supers.—W. H. WOODS.

Bee Shows to Come.

July 27.—North Norfolk Bee-keepers' Association. Great show of honey at Melton Constable Park.

August 1, 2, and 3—At Beverley, Yorks. Prizes for bees, honey, and appliances. Marshall Stephenson, secretary, York.

August 6.—Berks Association (Newbury District). Show of honey, &c. Entries close August 3. Special prizes for best 1-lb. section. Entry forms of Mr. W. Hawkes, hon. sec., Newbury.

August 6 and 7.—Northants B.K.A. Show of honey, &c., at Delapré-park, Northampton. R. Hefford, hon. sec., Boughton.

August 7.—At the Abbey Park Flower Show, Leicester. Honey show and fair of the Leicester Bee-Keepers' Association. Applications for space and schedules to A. J. Martin, Cossington, Leicester, before July 28.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules, W. Wilson, Acrehead, Dumfries.

August 16.—At Audlem, Cheshire. Liberal prizes for honey and beeswax. Entries close August 9. For schedules, apply T. H. Smith, solicitor, Audlem.

August 16.—At Maidenhead, Berks. Show of honey, bees, and appliances. Windsor District, Berks B.K.A., in conjunction with the Maidenhead Horticultural Society. Over £7 value in prizes. For schedule apply to hon. sec., W. S. Darby, Consort-villas, Clewer.

August 22 and 23.—Shropshire B.K.A. Annual show in connection with the Horticultural Society's great fête in "The Quarry," Shrewsbury. £35 in prizes for bees, honey, hives, and appliances. For prize-lists, &c., apply T. Whittingham, Upton Magna, near Shrewsbury.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

August 23.—At Madresfield, in connection with the Madresfield Agricultural Society; fourteen classes for bees, hives, and honey. Entries close August 18. Rev. E. Davenport, hon. sec., Burlish Lodge, Stourport.

August 29 and 30.—Staffs. B.K.A. At Stone. In connection with the Staffs Agricultural Society's meeting. Nineteen classes for bees, hives, honey, &c. Entries close August 4. Schedules from Harold Twentyman, Wolverhampton.

September 4 and 5.—At Coventry. In connection with the Warwickshire Agricultural Show. Annual show of the Warwickshire B.K.A. Liberal prizes for honey, bees, and appliances. For schedules apply J. N. Bower, hon. sec., Knowle.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries close September 11. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

Shows have been arranged in connection with the Lincolnshire Bee-keepers' Association as follows:—31st, Heckington, Morton (Bourne); August 1st, Blankney, Sutton Bridge, and East Stockwith; 2nd, Stickney; 6th, Eltham; 16th, Mablethorpe.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

South Walian (Penarth).—If you will send us a sample of the "stock of bees" referred to as occupying "a hole in a field," we will do our best to enlighten you as to taking them.

Gaffer (Gosport).—*Cone-Clearers in Roof. Vicious bees.*—1. Make the mouth of cone ¼in. in diameter. If there is a clear passageway to cone, and no light can enter except through it, we cannot account for dead bees found on quilts. 2. Unless bees are naturally of a vicious strain (in which case requeening is the only remedy) there must be a something not apparent on the surface to account for the propensity to sting. You might try and manipulate your friend's bees without causing trouble; if you succeed we should lay the blame on your own bees.

James Adams (Dunfermline).—Thanks for cutting. We had already received the same, but it would serve no good purpose to print such alarmist reports in our pages, besides they obtain all the publicity needed in the daily press.

James Broughton (Barnoldswick).—Though not stated in note, we suppose that one good queen-cell was left in the hive when you "cut out royal cells on the following day"? If this is so, there may be a young queen now in the hive, which has not commenced breeding yet. In any case no harm was done by giving a frame containing eggs and larvæ. But your note is too vaguely worded for us to clearly understand the case.

G. H. Strong, A. M., T. Mitchell, and "In a Fix" (Notts), have respectively sent samples of comb all of which are affected with foul brood. In every case we advise the prompt destruction of all combs with dead brood in them, and if our correspondents will refer to our issue of June 21 last, p. 241, they will find details of the plan we advise for dealing with their respective cases. It is no use trying to save or utilise weak lots of bees

from foul broody hives, but if they are fairly numerous — covering, say, six or seven frames—they may be saved.

EAST COASTER (Colchester).—We trust you have destroyed all the combs containing dead brood, whether "foul" or "chilled." There is every chance of the stock being cured, but while they are building out the foundation it will be well to help them with medicated food. 1. If the napthol beta be weighed into four equal portions, and one of these portions is divided into three equal parts (easily done by the eye), there will be sufficient in each part to medicate 12 lb. sugar. 2. It is only safe to give full sheets of foundation by way of spreading brood when the bees are numerous and weather warm. After the experience you have had of "chilled brood" we should avoid "spreading" it.

ELNOR (Cheshire).—1. The symptoms described make it very probable the bees were turning out the drones. 2. The hive referred to will answer quite well for wintering. 3. We are not sure about bee-tent being at Bolton Show.

A BEGINNER (Bristol).—1. We see no reason for you to suppose that queen is not mated, but if it was so she is not likely to be fertilised now. 2. Comb No. 1 contains pollen only. No. 2 has chilled brood in it, but whether it was "chilled" when taken from the hive or not we cannot say. 3. The "substance" is pollen.

E. A. MCLAREN (Sidbury).—*Dealing with Driven Bees.*—If the driving cannot be deferred till within a day or two of your return home, you will have a very difficult job indeed in dealing with them. To keep the bees in boxes building combs for three weeks or more will render them entirely unfit for transporting to a distance without a breakdown of the newly-built combs, and a consequent mess at end of journey, which could not be repaired so late as end of October. Can you not drive the bees, and send them home in boxes to be dealt with there? Referring to removing surplus, it should be done before "beginning of September," or much of it will be carried below.

H. J. WISBEY (Cambs).—We see nothing to indicate that the brood was dead when comb was cut out. It seems perfectly healthy, and should have hatched out all right. Moreover, the cells on opposite side of comb contain newly laid eggs in every cell, so we cannot see that anything is wrong. Please write again if brood fails to hatch out.

G. HEAD (Winkfield).—*Honey Samples.*—1, 2, and 3. Good in flavour, consistency, and colour (No. 1 extra good in last point). 4. Flavour only moderate, colour ditto, consistency poor. 5. Flavour fair, consistency poor, colour fairly good.

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Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

WANTED, HONEY RIPENER and STRAINER. W. J. GREEN, Bishop's Waltham, Hants. E 57

BEES for THE HEATHER—Guaranteed healthy 3-Frame Nuclei, 8s.; 4-Frame, 10s.; 5-Frame, 12s. Also NEW HIVES for THE HEATHER at 8s. 6d. Apply, J. TREBBLE, Romansleigh, South Molton. E 55

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LACE PAPER for GLAZING SECTIONS. Four neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

WANTED, SECTIONS and RUN HONEY (any quantity). Best quality only taken. Prompt cash. ALFRED HANSON, Bingley, Yorkshire. E 59

FOR SALE, several STOCKS of BEES in skeps. Miss COOKE, High House, Litcham, Norfolk. E 58

SPECIAL STRAIN.—VIRGIN QUEENS for August, from stocks that have given 100lb. surplus this season, 3s. 6d. each. WEBSTER, Middle Pavement, Nottingham. E 56

WANTED, CYLINDER EXTRACTOR. 2-frame, reversible speed wheels. C. REEVES, Coursehorn, Cranbrook. E 54

FOR SALE, good STOCKS BEES, guaranteed healthy, with young queens. Apply, F. GAY, Edmondsham, Cranborne, Salisbury. E 61

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SECTION CASES, for Exhibition, glassed both sides, 18s. per gross; 1s. 9d. per doz. J. S. GREENHILL, 80, Graham-road, Wimbledon.

FOR SALE, a limited number of DRIVEN BEES, headed with 1894 queens, for delivery in August and September, 1s. 6d. per lb. Orders executed in rotation. C. HAYNES, Hanley Castle, Worcester. E 52

HONEY.—Finest White Clover and Heather HONEY WANTED. Post samples and lowest prices, stating quantities. SPRING, Brigg, Lincs.

HONEY.—To INCREASE DEMAND, use my Recipes with each jar. Print your name on them. Six, 1½d.; 100, 1s. 6d.; 500, 6s.; 1,000, 10s.
WANTED, good CLOVER HONEY. Sample, &c. GEO. STOCKS, Sandiway, Northwich. E 41

MARKET for SECTIONS (any quantity), Run HONEY and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

PURE ENGLISH BEES, splendid strain. Swarms with Queen, suitable for building up, 5s., Queens, 3s., on rail. Swarm Boxes 2s. 6d., Queen Boxes 1s., unless returned. ALSFORD, Expert, Blandford. E 38

(See over.)

Prepaid Advertisements *(Continued)*

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

CHOICE YOUNG QUEENS, excellent strain, produced by seven years' careful breeding, guaranteed fertile, post free 5s., virgins, 2s. 6d. Rev. C. BEERETON, Pulborough, Sussex. 229

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

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Mr. KIRWAN'S Article has caused him to receive a great number of letters asking who makes the special Sections that he has been so successful with.

They are the PATENT GROOVED SECTIONS made by Thomas B. Blow, Welwyn, Herts.

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During the past winter I have purchased between two and three tons of the above. It has been bought indiscriminately from the Bee-Keepers of Great Britain and Ireland. I hope to require five tons during the coming autumn and winter, and shall purchase by preference from those Bee-Keepers who are among my customers for appliances. Special arrangements can be made to take the whole Comb Honey product of large apiaries, and special prices can be given for the Honey where part payment is taken in appliances. Spring crates are lent free to ensure safe transit by rail. Any quantity of English Bees-Wax can also be purchased.

THOMAS B. BLOW,

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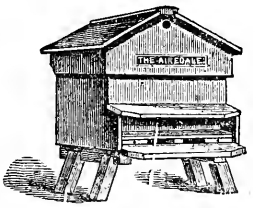

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In view of the disastrous spread of Foul Brood—especially in certain districts—I beg to announce that I have just brought to a successful conclusion a long series of experiments with a new agent, which I have found to be an absolute and simple CURE for this disease in all its stages—the first remedy that will destroy the spores, and at the same time be harmless to the Bees.

Half-pint Bottles, 2s. 6d. Pint Bottles, 4s.

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Price 6½d. Post Free.

To be had of the Author only. 206

Editorial, Notices, &c.

RUNAWAY SWARMS.

THE LEGAL RIGHT OF OWNERSHIP IN THEM.

The frequency with which we are applied to for a clear definition of the law on the right of ownership in runaway swarms, causes us to very heartily wish that the "legal right" was as clearly defined as is the moral right to the possession of what is so undeniably a marketable commodity as a swarm of bees. In the great majority of cases coming under our cognizance, the trouble arises from the hostile attitude of the party on whose premises the swarm settles, usually the outcome either of a morbid antipathy to bees, or of a quarrel with their owner. In several instances reported, the bee-keeper has not only been refused permission to take his swarm, but the bees have been deliberately and cruelly destroyed in his presence. Such high-handed action is not only to be reprobated, but deserves punishment, but it is wise to keep well within the law in all that is done. It must be borne in mind that forcible trespass renders the trespasser liable for damages, and to claim the right to follow a swarm on to another man's premises in defiance of the occupier is the nice point of law which bears upon the question of this right.

In reply to a correspondent, we last week, on page 296, gave what we believe to be the generally-accepted view of the law of the case; another correspondent (1,119 p. 307) again raises the question, and, in a private note, requests us not to refer him to cases reported in past numbers of our journal, but—for the benefit of those to whom back numbers are not available—to print something authoritative on the subject for their guidance. A third, whose case is now awaiting trial in a court of law, writes to say that, as at present advised, decisions reported in newspapers do not constitute "legal evidence," or are not received as such in court. In view, therefore, of the importance of the matter, we print below full details of a case from a former issue of our journal which bears directly on the point of refusing permission to follow a swarm, and, moreover, *does* constitute "legal evidence," in that it embodies the opinion of no less an authority than Blackstone, as will be seen from the report, which reads as follows:—

"A sitting of the Marlborough County-court was held on Tuesday, October 13, 1891, before his Honour Judge Caillard and Mr. Registrar Merriman.

"His Honour delivered judgment in the case of Charles Brooks *v.* Thomas MacArthur. In this case the plaintiff, who lives at Cadley, sought to recover 10s. from the defendant, a neighbour, for the loss of a swarm of bees which flew into his garden. According to the evidence given at the last court by the plaintiff's wife, an immense swarm of bees came out of her husband's hive, in their garden, and flew over some buildings into the defendant's garden. She followed the bees, and did not cease ringing to them. As soon as they began to pitch on a gooseberry-bush the defendant threw stones and a bucket at them, disturbing them. She was standing just outside the defendant's gate at the time. The defendant fastened up his gate and forbade her coming on to his ground. He began throwing at the bees again. Then—and this was important, his Honour said—they settled again on the same gooseberry-bush, after which Mrs. Brooks went indoors for some time, thereby losing sight of them for a considerable time. When she came out again they were gone. From the evidence it appeared she lost sight of them for two hours before she came out. To show the law on the matter, his Honour read the following extract from "Blackstone's Commentaries":—'Bees are *ferœ naturæ*; but when hived and reclaimed a man may have a qualified property in them, by the law of nature, as well as by the civil law; and to the same purpose, not to say in the same words with the civil law, speaks Bracton: occupation—that is, hiving or including them—gives the property in bees; for, though a swarm lights upon my tree, I have no more property in them, till I have hived them, than I have in the birds which make their nest thereon; and, therefore, if another hives them, he shall be their proprietor; but a swarm which fly from and out of my hive are mine so long as I can keep them in sight and have power to pursue them; and in these circumstances no one else is entitled to take them, but it has also been said that with us the only ownership in bees is *ratione soli*; and the charter of the forest, which allows every freeman to be entitled to the honey found within his own woods, affords great countenance to this doctrine that a qualified property may be had in bees, in consideration of the property of the soil whereon they were found.' The judge said he had not been able to find any other authority. Therefore the leading principle to be kept in view as regarded the plaintiff's right to have this swarm of bees was that he or his wife should

not have lost sight of them. Although there was some ill-natured and unneighbourly conduct on the part of the defendant, there was nothing to prevent the plaintiff's wife from steadily keeping the bees in sight after they again settled upon the gooseberry-bush. However, she went away for two hours, and lost sight of them. When she came back, the bees were gone. What became of them did not appear. Somebody else must have had the benefit of the swarm. He thought the plaintiff was not entitled to recover. The order of the court was that there be a non-suit, without costs."

It will be observed that in the above case Judge Caillard, in non-suiting the plaintiff, mentions as his reason for so doing, the leading principle to be kept in view, viz.: that to constitute a right to the swarm of bees they must not be lost sight of by the claimant or his representative from the time they leave the hive till they are claimed. This is the point we have always emphasised in giving advice, but the question of entering premises belonging to another and taking forcible possession of a swarm found thereon is a very risky proceeding, and one to be deprecated. The right to follow the swarm should be respectfully claimed—in the presence of a witness—and if refused, there is a good case for action in the county court for the value of the swarm.

MOVING BEES TO HEATHER.

Quite a number of letters having reached us requesting information as to moving bees to heather, we reprint the following from the August number of our monthly, the *Record* :—

In making preparations for removal to the heather the first point to be observed is, only take strong hives—those with a brood-nest of nine or ten frames, and the super or crate well filled with bees. Plenty of bees, young queens, built or drawn-out crates of sections, or shallow frames that have passed through the extractor, is the secret of getting heather honey. Any late swarms coming off at home should be taken out and joined to those at the heather if increase is not wanted. I have been in the habit for some years of having a few empty hives rigged out with half-sheets foundation, and placed at the heather. Any late swarms that come off towards end of July are taken out and put in these hives. Later on crates of drawn-out sections are given to them, and I seldom fail in getting a surplus of honey by this method. To the beginner the greatest care is necessary in packing up hives for removal. One day at least previous to the journey those intended to be taken should be selected, floor-boards secured with nails, and crates firmly fixed down. For ventilation, open cheese-cloth should be tied firmly down over the crates with strong cords, or strips of wood screwed on; everything made in readiness for removal except the closing of the entrance. On the evening they are to be taken out, as soon as all the flying bees are in, have ready a strip of perforated zinc, and tack over entrance. It is better if the journey can be accomplished the same evening, because should any mishap occur the darkness will come on, and give a chance to put the bees straight before daylight next morning. Having the hives at their destination, they should be all placed in position, and just before leaving remove the zinc from the entrances. Some days later another visit may be made to see how they are progressing, and, if need be, to give additional room, which in the hurry of the former visit was left unfinished.—WM. M'NALLY, *Glenluce, N.B.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[2034.] We have now reached the end of our honey harvest for 1894, and as soon as it is removed to the storehouse will be in a position to estimate the quantity and compare with previous seasons. That the season's results will be disappointing is certain, when we remember the roseate hues of the opening of the bee season and the later disastrous breaks experienced in weather suitable for the ingathering of the honey crop. The bee-keeper

located within reach of the heather may yet hope to secure the latter harvest, provided we get the promised dry, hot August our weather-prophets predict.

Thanks, friend Truss, for item *re* galvanised vessels for storing honey; the matter of actual contact of honey and the sides of the vessels can be very easily remedied or prevented by the use of the same material in which the busy bee stores her food—viz., wax. Heat the vessel, and then, whilst still hot, rub the inside with a piece of wax and you will have an immense cell in which to store your honey free from all contamination from any possible oxide of zinc if the honey should ferment. I opine it was *fermentation* that caused the mischief; and, again, ripe honey would not ferment. Here in this country our takes of honey are very small compared to our bee-friends on the American continent. I notice one of the bee-keepers away down South lamenting in an American bee paper that his crop was so small this year, though he admitted that he had the modest little lump of 17 tons; these are the men who want strong storing vessels.

I have referred in previous numbers to the McEvoy plan of dealing with foul-brood; if any readers have tried the method faithfully, carrying out the instructions, perhaps they will verify Mr. McEvoy's assertions that the method cures.

The season for extracting is with us. I would counsel beginners to extract from unsealed combs first, and keep their ripe honey separate from the honey extracted from combs that are not (and will not be) sealed over by the bees this year. A tall tin vessel, called in the catalogues of our appliances a "honey ripener," signifying that although it does not actually ripen unripe honey, yet it will by the force of gravity place all the best of the honey, *i.e.*, the thickest, at the bottom of the vessel, ready to be drawn off into bottles, and the top part of the contents of the tin (which is considerably thinner, especially when combs only partly sealed are extracted, and the whole run together) may be used as food for the bees, not sold as honey. The price of honey seems to require some authoritative statement. When shall we be enabled to have a price current for honey, collected from different central markets, say London, Liverpool, Manchester, Glasgow, Edinburgh, and published in alternate issues of the BRITISH BEE JOURNAL? I have no doubt our editors would publish a list if supplied, and I feel sure that our readers would welcome such a statement as a great help. Who among readers in these centres will send the wholesale prices that comb-honey in sections, glazed and unglazed, are making, also extracted honey in bottles. I myself have received some few letters asking if I knew the price of comb-honey this season. I know what I am charging myself, and I know that some of my old customers are asking for a supply at a reduction on last year's prices. That, of course, is out of the question, but it shows how eager buyers are for a cheap line, though, when they get it, it is often a question if the public reaps any of the benefit. I sold a few dozen unfinished sections to clear off, averaging perhaps 12 to 13 oz. each, and when I passed the shop in London a short time afterwards, the sections were marked up at cent. per cent. profit to the retailer—not a bad profit for hard times. I notice from schedule of Newbury Show, to be held on Bank Holiday, that prizes of £1 and under are offered in an open competition for the best section of comb-honey, no entrance-fee, only the section of honey to become the property of the committee; entries close August 3; Rev. W. E. Burkitt, judge. Hope to see a full class.—W. WOODLEY, *Beedon, Newbury.*

SAVE THE BEES!

[2035.] I have fourteen skeps of bees I wish to destroy—five golden (?) swarms, five top swarms, and four casts. The last swarmed June 28, the first May 4. Will you kindly tell me the best way to do this and obtain the honey? I have kept bees three years (starting with one swarm) in skeps, using the improved skep-supers, which worked well last year, but the bees have done nothing in them this. I am now taking the BEE JOURNAL, and have carefully studied two guide-books, but have not sufficient confidence to "drive" them, and only know of the old-fashioned method of burning with sulphur. I should also be glad to know the time it ought to be done? All being well, I intend to try frame-hives next year. I shall leave nine skeps for stock, seven of '93 and two of '94. Is it best to leave casts or swarms?—A. B. C., *Cambs, July* 24.

[We transfer the above query from the usual reply column in order to give it a little extra prominence here, in the hope that something may be done to save the poor bees from the sulphur-pit. And we trust our correspondent (a lady) will pardon us for making an effort to prevent such a holocaust! If only the honey is wanted, there should not be much difficulty in securing an operator willing to do the "driving" if he had the bees for his trouble. We therefore venture to defer reply to "A. B. C.'s" query describing "the best way to destroy the bees" in the hope that some competent bee-keeper located near Newmarket, Cambs, will volunteer to "drive" them, and send us his address, which shall be forwarded to the right quarter.—EDS.]

EXPECTATION *V.* REALISATION.

[2036.] We should never prophecy until we know. Our weather is mostly "samples," and the honey harvest, like all others, is at the mercy of the weather. The glorious bee weather in early July did not continue. The

cold, wet, and stormy period intervening arrested all surplus gathering for about ten days, which is a serious business at this season to all bee-keepers. My realisation will be about half my expectation, and I have no doubt this will be the experience of many. My increase in numbers of colonies by swarms, &c., has been rather more than desirable, thus still further reducing my honey harvest, and by the time these lines get in print (if they escape the "W.P.B.") I shall be making preparations to go into winter quarters. Thirty stocks will be made secure for wintering; and I am hoping by the experience gained this season to be better prepared for emergencies and obtain a more satisfactory return another year.

No wasps have I seen since the queens were flying. The late severe frosts no doubt proved a "frost" to them. Two of my swarms last year were destroyed by the wasps. On visiting my bees after a few days' absence, I found one hive contained more wasps than bees. The bees had lost the power to fly, and were dropping off the alighting board, and as they reached the ground they were cut in two by the surrounding wasps and carried away; the remainder I buried at once. The other swarm (in a straw skep) I removed home, hoping by change of place to give them a rest and enable them to recover; but in a few days every bee had vanished. Is it possible they had returned to the apiary four miles away and been slaughtered! I heard that fighting had been going on at the apiary about that time.

I shall not experiment again with the "Wells system." During two seasons my hive has been stocked with two colonies, and in a short time both colonies have shown a decided preference for one compartment (of course, both entrances are in front). Either the position of the hive, the extra activity of one queen over the other (or is it the nearest entrance which attracts their attention); and, no objection raised, the two stocks fraternise, thus reducing the strength of one end at the expense of the other. Both this year and last, after perceiving one colony reduced and the other crowded, I have drawn the dummy and let the bees unite, leaving the queens to settle the matter of the survival of the fittest.

Bee-keepers experience strange things at times. One of mine took place during a hot July Sunday in 1893:—I and a friend started out with skep and veil to secure a stray swarm. Our informant said they were located in an extensive osier bed a few miles out in the country, and had built combs as large as his hat. For a sum of 5s. he had promised to protect these bees until I could secure and carry them home. Through the smiling fields and by the winding river Derwent we strolled along. Past the fatal spot where several have gone to their death by bathing in this secluded, deep, and seductive place, until we arrived at the osier beds. Osiers thick and thin, high and low, from three to six feet high. We struggled along, beginning to feel ours was a fool's errand, there being no welcome hum of bees to be heard. Presently our guide shouts, "Here they are!" We saw we smiled, and said, "It's a wasps' nest."

"Nothing of the sort," says the man. "I have seen the bees working sure enough. What about the 5s.?"

I remarked, you take that nest to the Derby museum. The curator will be very pleased to receive it. As for us, we will hurry home to dinner, and the royal salute in store for us. A few weeks afterwards, on meeting our old guide, I remarked, How is that swarm of bees getting on? When, looking very wise, he said, "Ah, that was a bad job, wasn't it?"—F. WALKER, *Derby*.

A GIGANTIC SWARM.

[2037.] The enclosed cutting is from the *Horncastle News* of June 30, and to me has the appearance of a very "big goosebery." If, however, the paragraph is *bonâ fide*, I hope Mr. Garner will write to the B.B.J. and give some particulars. Was it from a "Wells" hive and thus a double swarm, or was it from a single hive, and, if so, what was the capacity of the hive? I have had some very heavy swarms this year, say about 7 or 8 lb., indeed, I never knew bees so plentiful, but, alas! up to a week or ten days ago they have only swelled the great army of the unemployed. However, matters are looking brighter now. White clover is in full swing, and limes just coming into flower, and looking into a super of standard frames spaced at 2 in. to-day, I had the pleasure of seeing the combs extending beyond the top bars, and I got my first view of '94 honey.—J. W. WILSON, *Revesly*.

[The cutting referred to reads as follows, and the swarm mentioned will no doubt consist of several swarms which have issued simultaneously and united on the honey.—EDS.]

"Mr. Garner, of Dyke (hon. secretary for the Bourne district of the Lincolnshire Bee-keepers' Association), had last week a phenomenally large swarm of bees. The swarm weighed 24 lb. The average weight is 4 lb, such a swarm containing usually about 3,500 bees. The swarm in question might therefore be computed at 84,000.

A BEE STORY.

BEES AT A CONFECTIONERY WORKS.

[2038.] Enclosed please find a cutting from the *Daily Telegraph* of July 3, which may interest readers of the B. B. J.:—

"Not in the neighbourhood of Regent's Park alone is natural history going wrong—probably owing to the heat. Mr. F. Cordeux-Rhys writes from the Alliance Confectionery Mills, Stamford Hill, to say that if any bee-keepers feel astonishment at finding their

hives emp'y, the loss may be explained by the fact that 'a mighty horde of insect marauders visited Stamford Hill, and by sheer dint of overwhelming numbers compelled the makers of confectionery to vacate their posts, leaving the enemy in full possession. The victory of the bees was by no means a bloodless one, as thousands upon thousands perished, but their human opponents suffered severely from stings. Sir John Lubbock, in some of his charming books anent insects in general and bees in particular, holds the latter up to admiration as the incarnation of all the virtues. I fear it would have been a rude awakening for him had he witnessed the scandalous manner in which these particular bees behaved, for, not content with invasion, they took to robbery, and then, as if this was not bad enough, they got hopelessly, helplessly, and irretrievably intoxicated on liquid sugar. Through their debauchery, however, Nemesis overtook them, for it is an absolute fact that we swept up half-a-dozen large pailfuls of these insect paragons and consigned them to the crematorium—or, in other words, the engine fire.'"

I have two hives at Stamford' Hill which are doing fairly well, considering that they are in London, and I looked through both of them on the 3rd ult., but apparently they have not lost many at the "Alliance Confectionery Mills," though it is, perhaps, impossible to tell, owing to the number of newly-hatched bees. The question is, will the bees, now that the limes are in bloom, get honey from them in preference to the sugar at the above mills, and how could such an immense number of bees have collected together? It seems almost as if a systematic attack had been made.—A. A. C., *Stamford Hill, N.*

[We received quite a batch of copies of the cutting referred to; so numerous were they, and addressed apparently to every paper in London, that it suggested a mighty good "free ad." for the firm in question. We should like to know whose bees suffered in any appreciable degree as being part of the "half a dozen large pailfuls"? The whole story as told suggests a pailful or two drawn from the imagination of the writer.—EDS.]

BEE-KEEPING IN SOUTH AFRICA.

[2039.] I send the enclosed cuttings from local Cape Papers as they might be of interest to you—not necessarily for publication.

There was every probability at one portion of the present Session of our Cape Parliament that municipalities would be given the power to "prevent" bee-keeping in villages. I am glad to say, however, that before the Third Reading the matter, with regard to bees, was withdrawn.

I have kept bees for the last eight years, and have been a subscriber to the BEE JOURNAL for that period. I was thus in a position to draw attention to the article on p. 614 of your issue of Dec. 20, 1888—*vide* cutting below.

I regret, however, that owing to pressure on space the article referred to could not be inserted along with the letter. The latter, I believe, has had some effect in disabusing the minds of several persons, to my knowledge, who blamed bees for being the cause of damage to fruit, &c.—BEE, *Cape Town, July* 4.

To the Editor of the "Cape Times."

SIR,—I notice that it is contemplated by the Village Management Act Amendment Bill now before the House of Assembly that bee-keeping within the limits of towns and villages is likely to be prevented in the future, presumably owing to an unfortunate accident whereby a man was stung to death by the insects which are now perturbing the Legislative mind. Surely this would not be a sufficient reason for driving away bees from all the towns and villages in the colony? I very much doubt if there is such a law in existence in any other part of the world. On the contrary, bee-keeping is generally encouraged, and I believe some Governments grant pecuniary aid for the purpose. It is well known that bees will not attack unless molested or angered in some manner, and I do not think they should be blamed for consequences resulting from simple self-defence. If the bees are kept in such a position as to prevent pigs, horses, &c., and also children, from coming into close proximity of the hives, there will be no trouble or danger.

It appears from your report of the Parliamentary proceedings of the 16th inst. that Mr. De Waal accuses bees of "seriously damaging" vineyards. Now, I may mention that probably the highest authority on this subject—the BRITISH BEE JOURNAL—in its issue of December 20, 1888, page 614, gives a "Report of Special Agent M'Clain to Entomologist of the Department of Agriculture," dealing specially with experiments for the purpose of showing whether "Bees Injure Fruit" (grapes), proving beyond doubt that those insects cannot injure sound fruit, and showing that other causes must injure the fruit before the bee can obtain access to the juice. The immense amount of interest connected with a well-kept hive is worthy of many hours' study, and it would be a great pity to cause the removal from villages of bees which, in many instances, add to the resources of the cottagers, besides providing a delicacy for the table which few persons would decline or fail to enjoy.—I am, &c., "BEE."

TAKING BEES TO HEATHER.

[2040.] Your correspondent "Annone" (2,025, p. 294) asks for hints for taking bees to heather, and, as he says he intends using zinc that the bees can *get their heads through*, let me caution him against doing so. If he could arrange a hole for every bee, no doubt the plan would be a great success; but as that is impossible, it is only the few who *get their heads through* that benefit by the large holes,

and the others run a great risk of suffocation; and I had several hives smothered one year by using zinc with large holes.

I have also large sheets of zinc with a frame round them to drop over the top of crates, so as to give a good through ventilation.—A. J. H. WOOD, *Bellwood, Ripon, July* 28.

WORKER BEES IN QUEEN CELL.

The following letter was received by Sir Thomas Gibson-Carmichael who—deeming it to be of general interest to bee-keepers—has sent it on to us for insertion and comment, by way of explanation, as he has himself had no experience of a like kind:—

"Brae Port, Dunblane, Perthshire,
"June 20, 1894.

"DEAR SIR,—Speaking casually to me at the last H. and A. S. show in Stirling, you said you were always interested in abnormal occurrences among bees. I send you by this post a queen cell, with two apparently well-formed but small workers; I have not taken them out, though their position has been disturbed. On June 1 I accidentally deprived the hive of its queen, as the sequel shows. On the 13th it threw off a swarm which returned, so I set to work to cut out queen cells, of which there were three. Noticing that there was neither egg nor larvæ, I replaced two. Next day, as failure is rare, I removed a second. Then 'piping' began, which showed me there must have been a virgin in all the time, hatched out, that is, before I investigated. So I cut away the last royal cell on the 16th. Piping continued, but I could hear no answering bark. Rain all the 17th. Swarm left on 18th. On 20th I looked in and found two queen cells where I could not have overlooked them; of these I have cut out one, which I send you; the other I have left for a while, if it be really a queen they must have carried the egg from another hive, for though I introduced a frame of brood, that was before the 13th at latest, and far removed from where these two royal cells have appeared. The bees seem to have been so set on swarming that they left no proper provision, and the remainder must have joined two advanced worker cells together. —J. T. F. FARQUHAR (Rev.)."

We have had cases of one worker being found sealed up in a queen cell, but it is very unusual for two to be so found. They are generally head downwards when so discovered, and are sealed in by the worker bees when they go into the cell to clean it out. The hinged capping being still on the cell it is soon fastened up, and the unwary bee is trapped and made prisoner. Mr. Farquhar suggests that the bees referred to have been reared in the cell, two worker cells being formed in its construction, but this is very improbable, even from the position in which the workers were found.

Queries and Replies.

[1114.] *A Swarm with two Queens.*—I found a very large swarm of bees on a tree about 200 yards from my apiary. Not wishing to increase the number of my stocks, I searched for the queen in order to destroy her. In doing this I found there were two queens. I did not see the swarm come off, but having killed the queens the bees all went back to one hive. Is it likely the two queens came from one hive?—FLEMING, *Farnham.*

REPLY.—Yes; it has not been at all uncommon this season for swarms to issue having two or even more young queens with them.

[1115.] *Do driven Bees forget their old Home?*—1. Do bees just driven from a skep (when "taking up" honey) partake of the same nature as a swarm in forgetting their old home—*i.e.*, can I run the driven bees into a frame-hive about 200 yards away from their old home? 2. Will bees hived now on full sheets of foundation, and fed well, travel without fear of combs breaking down about Christmas-time?—P. H. GRAY, *Tringhoe, July* 25.

REPLY.—1. Driven bees do more or less forget their old home after driving; but not entirely so. Not much loss would, however, result. 2. Combs not built so late in the year and not bred in would be risky for transit, but could be made safe by "wiring" the foundation.

[1116.] *Transferring Swarms from Straw Skeps: Renewing Combs.*—I have a number of natural swarms this year hived in straw skeps. 1. When should they be transferred to frame-hives? 2. Would it do to remove the honey from the combs in the skeps and feed with syrup? I have a number of old combs in bar frame-hives, which hives have swarmed this year. 3. When should these combs be removed and replaced with foundation, the combs being two years old? 4. What is the size of the standard frame? 5. What is the usual size of the best frame-hives as to inside dimensions of body of hive?—CYMRO, *Ruabon, July* 25.

REPLY.—1. If transferring is determined on the sooner it is done the better after the middle of August, when breeding for the year is falling off. We cannot, however, help expressing regret—in our correspondent's interest—that the combs were not built directly in the frames. Combs transferred from skeps to frame-hives usually mean patched-up and poor ones, not conducive to comfort or ease in manipulating. 2. If combs are heavy with honey, some of it must be extracted to ensure their not breaking down when tied into the frames, but we should leave all honey stored above brood. 3. There is no need at all for removing combs because they are "two years old." The best course is to give a couple of

sheets of foundation—in lieu of old combs removed—in the early summer of each year; and thus they are gradually renewed. 4. 14 in. by 8½ in. outside measure, with 17-in. top-bar. 5. A hive holding ten or eleven frames and a dummy is generally considered the best size. The internal dimensions allowing ½ in. below frames and ¼ in. between side-bars and hive walls.

[1117.] *Transferring to Frame-hives.*—Can I transfer a stock of bees from a straw skep to a bar-frame hive now, or should I wait until later, and drive the bees into the hive? The bees in the skep have neither swarmed, nor made any surplus honey this year, but it is a strong stock. I have filled the frame-hive with ten sheets of foundation, and purpose putting the skep on the top of the frames, so that the bees may work down into them. Can I do this now? The skep is at present placed on a stand about 18 in. off the ground. Would it matter if the bar frame-hive were placed on the ground, so that the entrance would only be raised about 6 in. off the ground, instead of 18 in.? I propose to take away the stand altogether.—E. C. BIRD, *Brixham, S. Devon.*

REPLY.—It is now too late in the season for hoping that the bees would work down into the frame-hive this year. It would, however, do no harm to try them, and the bees would winter in the skep as fixed quite well if they chose to take up their winter quarters in it. Another course would be to drive the bees from skep and run them into the frame-hive. Cut out one comb of brood and tie it into a frame and insert it in lieu of one of those fitted with foundation. Set a queen excluder above the frames, and set over all the skep with remainder of combs. When the brood has hatched out from skep and queen is breeding below, the skep may be removed.

[1118.] *Feeding Driven Bees and Late Swarms for Winter.*—1. If I drive two skeps at end of August and unite the bees on, say, ten frames with full sheets foundation, feeding them with 1 lb. syrup daily for twenty-one days, will they be able to build out combs and store sufficient for winter so late as that? 2. In rapid feeding how long ought a stock be given to take down 10 lb. of food? 3. I have three late swarms that will want about 25 lb. of food; will it do if I feed them up in the beginning of October? 4. Is there any practical method of putting sugar in a feeder and supplying it with water in such quantities as will occupy the bees a week in emptying? 5. I am very much troubled with ants; one hive (with legs) I looked at yesterday was swarming with them outside dummy. Another without legs, (a "W.B.C.") had ½ pint of ants' eggs between outer and inner cover. Is there anything more effective as a preventive than turpentine? 6. I have some foundation now I had last year; will this be usable another year? 7. There is heather a full mile off here, is that too far for bees? 8. There are any amount of lime trees about here, but they do not flower. I see in the B. B. J. this is the case somewhere else. Are you sure that there is not a non-flowering species.—H., *Yarmouth.*

REPLY. -1. Yes. 2. A strong stock will take down 10 lb. of food in a single night. 3. Yes, but September is better. 4. Any dealer in bee appliances will supply you with a suitable feeder for such a purpose, but a large, wide-necked glass jar may be made to answer all requirements, and if thick calico is used for covering it will take several days to empty an 8-lb. jar of syrup. 5. Standing the legs in vessels containing water is the most effectual remedy. With the "W.B.C." hive sprinkle powdered naphthaline between hive and outer case. 6. Yes. 7. No. 8. We can only repeat our reply to query referred to.

[1119.] *The Legal Right of Ownership in Swarms.*—Has a bee-keeper a legal right to enter a field or garden belonging to another person in order to take a swarm (belonging to the bee-keeper) which has clustered there, even if the owner of the field or garden objects? If he has this right, could you refer to any Act of Parliament or legal decision by which it is secured?—H. C., *Dublin.*

REPLY.—As nearly as can be easily defined, it would appear that a bee-keeper has a legal right to follow his swarm to wherever it may go, provided that he, or someone representing him, never loses sight of the bees from the time they leave the hive as a swarm. If he is refused permission to enter and secure his bees, after formally demanding them, he can recover their value in the county-court. This is the only definition of the "legal right" we are able to give; but a case directly bearing upon the point involved is very fully reported on p. 301 of this issue, to which please refer.

[1120.] *Swarming: When do Second Swarms Issue?*—A correspondent in the BEE JOURNAL of July 19 (2022, p. 284) mentions that he has had a second swarm on the fourth day after the issue of the first. I have recently had a similar experience on the third day. On the 8th ult. a swarm came off from one of my hives which had two lots of shallow frames on it, and was successfully hived. Three days afterwards a second swarm of fair size came out. I saw the first swarm issue from the hive and I saw the bees (the queen having been caught) return to their old home in the second case. 1. Is not this an unusual occurrence? 2. Can you account for the fact that vagrant swarms year after year seek refuge in the same spot, say, a hollow tree or chimney? 3. Are bees supposed to mark a future home before they swarm? as occasionally a swarm appears to go in a straight line from the parent hive to some

hollow tree. I obtained a good swarm a few weeks ago by driving the bees from under the floor of a bedroom in a dwelling-house, to which they had obtained access two or three days before through a narrow space between two bricks.—E. C., *Ince, Cheshire, July* 24.

REPLY.—1. This peculiarity of the present season is referred to in "Hints" on p. 291 last week. 2. It is a well-attested fact that vagrant swarms will locate themselves for successive years in the same spot, and the only way of accounting for it is the attraction of the combs contained in the place chosen.

[1121.] *Making Artificial Swarms.—Bees Deserting Brood.*—I was much interested in your reply to "Novice" (1075, p. 247), in JOURNAL of June 21, on the subject of chilled brood, because I made, about that date, an artificial swarm by taking four frames of brood and eggs from a swarmed hive, which I put into another hive, and stood it on the stand of a very strong stock, which I moved some distance away. The next morning I found that the bees from stock had joined the next hive instead of taking to frames of brood. I thought that brood would be probably useless, but put it into another hive, and it hatched out all right. 1. Can you suggest any reason why the bees left the brood, the day being bright and warm? I had a swarm on the 14th inst., and, not wishing the stock to swarm again, I opened the hive yesterday (19th) to cut out queen-cells, and was surprised to find queen hatched, and the queens in cells walked out as I broke them off. 2. How do you account for queens hatching so soon? Weather is still very broken, and temperature low—rarely above 60 deg. during the last week. Swarms have been plentiful, but honey very scarce. Do not think the average will be more than 10 lb. per hive from flowers and clover, but hope weather may clear up before heather blooms, which it is showing no sign of at present. I have had a good many sections spoiled by brood this year, so am convinced that excluder zinc is necessary, although I have never had reason to complain before of many spoiled sections. I have had one hive which deposed old queen, and another, which I attend to for a friend, did the same. Hoping weather may settle soon, that we may not have much feeding to do.—HY. MARR, *Rosewood, N.B.*

REPLY.—1. Probably the bees did not wholly desert the brood till the morning, when they were missed, and so many have kept the brood from chilling during the night. Your method of making the artificial swarm was, however, defective and against rule—hence the failure. 2. A good number of cases have occurred this year where top swarms have issued headed by young queens—the old one being deposed beforehand. Yours may have been another instance of this.

Echoes from the Hives.

Ballindalloch, N.B., July 23.—From a bee-keeper's point of view the weather here during the past fortnight has been most disappointing—every day rain has fallen almost continuously, consequently bees have been confined to their hives. It is doubly disappointing when we note that the two best weeks of the year have been lost. At this date last year I had thirty to forty sections from some of my hives, and to-day there is not a finished section on my best one. Should the weather become favourable a fair harvest would yet be secured, but at present there is no appearance of any such change.—ALEX. STRATHDEE.

North Notts, July 30.—My hives—seven in number—came out very strong and fresh last spring. No feeding required, but weather only settled down just in time to prevent me having to do it. Clover honey is our mainstay, but for the first ten days or a fortnight the bees could do nothing; the last week of June and beginning of July, however, made amends. Since then we have had a fortnight's bad weather; very disheartening to see such abundance of clover bloom, and the bees not able to work on it. However, it has again taken a turn for the better; we may get a little more surplus, but if not, my yield will be a fair one, I think. I have not done much extracting as yet, but the quality is everything one could wish. Only one swarm from seven stocks, and that was returned after cutting out queen-cells, as I did not want increase. There are very few frame-hives in this neighbourhood—I know of none within several miles. Skeps as a general rule swarmed late, and often only once, and—probably due to the weather—many of them not at all.—STRATTON.

Sutton, July 24.—My collection of honey up to last Saturday was as follows:—No. 1 hive, 17¼ lb.; No. 2 hive, 14¾ lb.; No. 3 hive, 13 lb. I may mention that I keep my hives in the garden of a friend residing at Boxhill, my own garden not being suitable for bees. Do you think my result is a good one considering the bad weather we were having?—A. SPRIGHTLING.

[In a poor season of course anything in the way of surplus may be considered "good," though 45 lb. cannot be regarded as a good result from three hives.—EDS.]

Bee Shows to Come.

August 6.—Berks Association (Newbury District). Show of honey, &c. Entries close August 3. Special prizes for best 1-lb. section. Entry forms of Mr. W. Hawkes, hon. sec., Newbury.

August 6 and 7. — Northants B.K.A. Show of honey, &c., at Delapré-park, Northampton. R. Hefford, hon. sec., Boughton.

August 7.—At the Abbey Park Flower Show, Leicester. Honey show and fair of the Leicester Bee-Keepers' Association.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes. Schedules, W. Wilson, Acrehead, Dumfries.

August 16.—At Audlem, Cheshire. Liberal prizes for honey and beeswax. Entries close August 9. For schedules, apply T. H. Smith, solicitor, Audlem.

August 16.—At Maidenhead, Berks. Show of honey, bees, and appliances. Windsor District, Berks B.K.A., in conjunction with the Maidenhead Horticultural Society. Over £7 value in prizes. For schedule apply to hon. sec., W. S. Darby, Consort-villas, Clewer.

August 22 and 23. — Shropshire B.K.A. Annual show in connection with the Horticultural Society's great fête in "The Quarry," Shrewsbury. £35 in prizes for bees, honey, hives, and appliances. For prize-lists, &c., apply T. Whittingham, Upton Magna, near Shrewsbury.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

August 23.—At Madresfield, in connection with the Madresfield Agricultural Society; fourteen classes for bees, hives, and honey. Entries close August 18. Rev. E. Davenport, hon. sec, Burlish Lodge, Stourport.

August 29 and 30.—Staffs. B.K.A. At Stone. In connection with the Staffs Agricultural Society's meeting. Nineteen classes for bees, hives, honey, &c. Entries close August 4. Schedules from Harold Twentyman, Wolverhampton.

September 4 and 5.—At Coventry. In connection with the Warwickshire Agricultural Show. Annual show of the Warwickshire B.K.A. Liberal prizes for honey, bees, and appliances. For schedules apply J. N. Bower, hon. sec., Knowle.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1 lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

September 12 and 13. — Scottish Bee-Keepers' Association, in connection with the show of the Caledonian Horticultural Society, Waverley Market, Edinburgh. Schedules ready shortly. John Wishart, Assistant Secretary, Castlecraig, Dolphinton, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries close September 11. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

J. Ewins (Ash).—*A Beginner's Queries.*—We fear that you are "beginning" at the wrong end of bee-management to command success. Why not be content with ordinary hives and ordinary bees until a little experience has been gained? Managing "Wells" hives and italianising the bees are matters which should not be indulged in the first season. Add a couple of lots of driven bees to the "Wells" in the autumn, as you wish to, and can get plenty of driven bees, but pray leave italianising for a season, if you will take our advice. Replying to other queries :—2. Either loose paper or hay will do for packing. 3. Good paint is the "best waterproofer," with thin sheet zinc for roofs. 4. A self-hiver is used for hiving swarms automatically. 5. The hives will do better in the open if well packed.

J. H. Childs (Teddington). — *Colour of Honey.*—Some honeys are very light in colour, others very dark, yet both equally pure, and there is certainly no reason why the dark should not be used in your household, or for "feeding the bees on," if the flavour is, as you say, equally good as the light.

D. W. Lewis (Fishguard).—If on examination of the combs of the swarm one is now found suitable for showing it had better be removed at once and wrapped up carefully till wanted. It will be found on the outside if at all, as the centre ones are sure to contain brood. Replace with a sheet of foundation.

A. Pollock (Hyde).—Comb contains only freshly-gathered pollen. Its dark colour is simply due to the source from which it is gathered. So far from being harmful to brood or bees, it is the main food of the former.

Tyro (Rusholme).—1. Comb is affected with foul-brood. See reply to A. Strong and others on p. 298 last week. 2. Yes.

W. Hawkes (Royston).—Bees moved 150 yards at this season will return in considerable numbers to the old stand, and may be lost in consequence.

J. W. N. (Westmoreland).—Both samples of honey received are quite fit for show purposes. They are very much alike in quality, and have been apparently gathered in the same district.

Heather Bell (Alloa), Buzzer (Lancs.), J. D., and Others.—*Moving Bees to the Heather.*—Full instructions for moving will be found on (p. 302), and no time should be lost in getting the bees to the heather, as the season is getting advanced for heather work.

A. B.—Queen is a young one, and has all the appearance of a virgin.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

HEALTHY DRIVEN BEES, with Queen, 1s. 6d. per lb. Packing-box returnable. GARNER, Broom, near Biggleswade, Beds. E 64

WANTED, Two 5-lb. Lots Healthy DRIVEN BEES. EXCHANGE Cock Canary, full song. Approval. O. PUCK, 6, Handworth-avenue, Hale End, Chingford. E 62

FOR SALE. 62 STOCKS BEES, and 11 NUCLEI, in splendid condition, with the whole of the season's Honey. Sold through leaving. For particulars apply WILLIAM LANE, Peaton's Farm, Lytchett Matravers, Poole. E 63

BEES for THE HEATHER—Guaranteed healthy Nuclei, 3-Frame 8s.; 4-Frame, 10s.; 5-Frame, 12s. Also NEW HIVES for THE HEATHER at 8s. 6d. Apply, J. TREBBLE, Romansleigh, South Molton. E 55

LACE PAPER for GLAZING SECTIONS. Four neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

SPECIAL STRAIN.—VIRGIN QUEENS for August, from stocks that have given 100lb. surplus this season, 3s. 6d. each. WEBSTER, Middle Pavement, Nottingham. E 56

FOR SALE, good STOCKS BEES, guaranteed healthy, with young queens. Apply, F. GAY, Edmondsham, Cranborne, Salisbury. E 61

GUARANTEED HEALTHY DRIVEN BEES, ready for delivery. 1s. 6d. per lb., for 5 lb. lots or over, queen included. Warranted 1894 fertile queens, 3s. 6d. each. Safe arrival. Packing included. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. E 60

SECTION CASES, for Exhibition, glassed both sides, 18s. per gross; 1s. 9d. per doz. J. S. GREENHILL, 80, Graham-road, Wimbledon.

HONEY.—Finest White Clover and Heather HONEY WANTED. Post samples and lowest prices, stating quantities. SPRING, Brigg, Lincs.

HONEY.—To INCREASE DEMAND, use my Recipes with each jar. Print your name on them. Six, 1½d.; 100, 1s. 6d.; 500, 6s.; 1,000, 10s.
WANTED, good CLOVER HONEY. Sample, &c.
GEO. STOCKS, Sandiway, Northwich. E 41

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Editorial, Notices, &c.

USEFUL HINTS.

WEATHER.—As the bee season draws to a close the interest taken by bee-keepers generally in the weather—as some one has said—"grows gradually smaller and beautifully less," while for the southern half of those who are of the craft it is "about all over for '94." Bees are reported to be still doing well in the north, but the rain continues to interfere with steady honey gathering, and makes it doubtful if more than a very moderate crop will be secured, even in the more favoured northern districts. This view gathers confirmation as the various show reports reach us, wherein we learn of good honey being staged, but nowhere in very great quantity. Another fortnight, however, will enable us to tot up the all-round results with some degree of certainty.

PRICES CURRENT OF HONEY.—When correspondents make application to us for market prices for honey—as they do oftener than we like, because of our entire inability to give any satisfactory reply—just so often does it make us regret the seemingly insurmountable difficulty in the way of publishing regular reports of prices current for honey, because of there being no obtainable reports to publish regarding the market value of the home-grown product. We should probably not have much trouble in getting at the only market prices available, viz., those of foreign honey; but we see no advantage to the British bee-keeper in knowing for how many—or how few—shillings per cwt. this can be bought. For the rest, it is so largely a question of supply and demand that it seems impossible to regulate the prices in anything like an all-round satisfactory manner. Only the other day a correspondent, when asking our help in finding a market for his honey, offered to leave the price entirely to us; but, without discounting this mark of kindly confidence in ourselves, we could not avoid thinking of another correspondent who once wrote to say that "sooner than take less than a shilling a pound for *my* honey it goes back to the bees." Consequently, we were silent as to price. In fact, so well informed are we on the wide divergence of ideas as to the value of honey among our many readers that we are perforce compelled to leave the market price to settle itself between seller and buyer, and the demand in the district concerned. On the other hand, and touching the broader aspect of the question viewed as a national one, we may say that none would welcome more heartily than ourselves any arrangement by means of which information of real use and value to the bee-keeper of this kingdom could be published. The very nature of the position we hold, however, enables us—more than most people—to realise how great are the difficulties in the way of obtaining such information as would enable us to publish a reliable weekly report such as would satisfactorily solve the question so far as it concerns British honey. As for the foreign article, we have no hesitation in saying that to print in our pages the market price of all honey imported would do some harm and no good. Before quitting the subject, it occurs to us to say that, as some misapprehension appears to exist in the minds of honey-sellers as to what is a fair wholesale price for honey in bulk, we have often thought that some one of those who buy in bulk and "jar off" for sale to shopkeepers would do good service—by way of removing prevalent notions as to the profits of "the middleman"—if we could have a report from a buyer of the cost attendant on buying and selling; or between the time the honey leaves the hands of the producer and is placed in those of the shopkeeper.

(*The number of show reports compels us to hold over completion of "Hints" till next week.*)

ROYAL LANCASHIRE AGRICULTURAL SHOW.

Held at Bolton, in beautiful weather, on July 26, 27, and 28, and well attended throughout. The Lancashire and Cheshire B.K.A. had their tent on the ground, in which Mr. W. J. Anstey, the association expert, gave lectures and demonstrations twice daily to large audiences.

The honey department was large and conveniently fitted up, a collection of honey-producing plants in frames being hung round the walls, and in the centre Mr. Geo. Rose, of Liverpool, had a stand, with a good collection of appliances. There was a very good show

of honey, the entries being numerous, especially in the open classes. The extracted honey shown was mostly of the very best quality. Sections not so good as is sometimes seen, a few specimens, however, being very fine, the first prize in the open class being very superior. The Rev. J. F. Buckler officiated as judge, and made the following awards :—

Twelve Sections 1894 *Honey (open).*—1st, Miss Susan Ward, Hadnall Hall, Shrewsbury ; 2nd, Wm. Woodley, Newbury ; 3rd, T. R. Horton, Harley Tower, near Much Wenlock.

Twelve Jars 1894 *Honey (open).*—1st, Rev. E. Charley, Ince Vicarage, Chester ; 2nd, J. F. Williamson, Fleetwood ; 3rd, R. W. Nickson, Frodsham, Cheshire.

Twelve Jars 1894 *Honey, light coloured (collected within the county).*—1st, Dr. B. E. Jones, Freckleton, near Preston ; 2nd, Fredk. H. Taylor, Fallowfield, Manchester ; 3rd, John Hale, Croston, near Preston.

Twelve Jars 1894 *Honey (other than light coloured).*—1st not awarded ; 2nd, Fredk. H. Taylor.

Twelve Sections 1894 *Honey.*—1st, Dr. B. E. Jones ; 2nd, Fredk. H. Taylor.—(*Communicated.*)

NOTTINGHAMSHIRE B.K.A.

The annual show of the above association was held on July 26, in connection with the Southwell Horticultural Society. The association provided a very full list of prizes both for honey and appliances. In the appliance classes, however, there were no entries. This, no doubt, arose from the fact that one of the clauses in the conditions of exhibition was as follows :—"The first prize will be withheld unless three or more exhibits are staged." A manufacturer would not go to the expense of making an exhibit upon this chance, considering that the second prize was only 20s. There were also several other shows being held at about the same time. The honey classes were well filled with exceptionally fine samples of honey. There were the large numbers of nineteen entries in one class and sixteen in another. The class for observatory hives with bees was well patronised, there being seven entries. The stewards, who performed their work admirably, were Messrs. G. H. Elliott (Southwell), J. Holmes, and W. Measures, with the indefatigable Mr. A. G. Pugh as hon. secretary.

The bee-tent (open free, as it always ought to be) was well attended. Lectures were given by a well-known expert from the British Beekeepers' Association, who, in conjunction with one of the stewards—Mr. Holmes—acted as judge.

The following is a list of the prizes :—

Open Class.

Best Six 1 *lb. Jars Extracted Honey.*—1st, George Wood ; 2nd, W. Lee ; 3rd, Lieut. Hawker, R.N.

Members' Classes.

Best Exhibit of Honey in any form, not to exceed 112 *lb.*—1st, A. G. Pugh ; 2nd, G. H. Elliott ; 3rd, W. Lee.

Best Twelve 1 *lb. Jars Extracted Honey.*—1st, Mrs. White ; 2nd, W. Lee ; 3rd, Geo. Wood ; 4th, T. Maskery ; 5th, H. Cartledge.

Best Six 1 *lb. Sections.*—1st, H. Wiggat ; 2nd, G. Marshall ; 3rd, W. G. Elliott.

Best Six 1 *lb. Jars Granulated Honey.*—1st, H. Merryweather, jun. ; 2nd, A. Mortimer ; 3rd, T. Riley.

Best Frame of Honey for Extracting.—1st, H. Raven ; 2nd, A. Mortimer ; 3rd, G. H. Elliott.

Best Six 1 *lb. Jars Extracted Honey (previous non-winners only).*—1st, G. E. Mills ; 2nd, J. Herods ; 3rd, G. Bell.

Best Three 1 *lb. Sections (previous non-winners only).*—1st, W. G. Elliott ; 2nd, Mrs. Harrison.

Best Glass Super.—1st, A. Mortimer.

Mr. T. B. Blow's Special Prizes.

Best Twelve 1 *lb. Sections in Blow's Sections.*—1st, A. Mortimer ; 2nd, W. G. Elliott.

Best Twelve 1 *lb. Jars Extracted Honey in Blow's Jars.*—1st, R. Mackindon ; 2nd, W. Measures.

Beeswax.—1st, H. Raven ; 2nd, W. Broadbury.

Bees with Queen in Observatory Hive.—1st, H. Merryweather, jun. ; 2nd, A. Mortimer ; 3rd, W. Measures ; 4th, G. Wood.—(*Communicated.*)

HONEY AND BEES AT THE YORKSHIRE SHOW.

The fifty-seventh annual show of the Yorkshire Agricultural Society took place this year on August 1 and 2, at Beverley, the capital of the East Riding. Beverley is an old minster town just at the commencement of the geological rise of the land known in the south as Downs and in the north as Wolds. On the rising, rolling land is the ancient racecourse, which was utilised as the show ground, and some idea of the magnitude of the Yorkshire show may be gathered from the fact that the whole extent of the course was occupied by it. To proceed to the exhibits which interest us most, we notice that the show of honey is slightly under the average in point of quantity, but in quality—extracted honey in particular—there is a decided annual improvement, so much so this year that it seems impossible for finer samples than some of the best to be produced anywhere, such honey having a base of white clover.

It will not be much consolation to disappointed exhibitors to reflect that prizes all along the line—hives, appliances, bees, and honey (extracted and in sections, heather and clover)—have gone to prominent members of our associations, British, county, or district.

The continued advancement made by Mr. W. Dixon, Beckett-street, Leeds, and Mr.

A. C. Jemieson, Dringhouses, York, in hive and appliance manufacture, leaves nothing to be desired, their productions being quite up-to-date and noticeable for high finish.

It is a matter of satisfaction that Miss Lawrence, of East Keswick, who has only been a bee-keeper three years, under the tuition of the Y.B.K.A., and who took the premier prize last year, reached the second place this year.

Although the weather was most unpropitious, Mr. Grimshaw managed to snatch intervals for his lectures in the bee-tent, and the interest was such that when rain did come on during their delivery the audiences were not dispersed by it, those even who had not umbrellas remaining until the conclusion of the lecture. There was the usual amount of question answering between whiles, which almost ran one lecture into another.

The Rev. R. M. Lamb, assisted by Mr. A. C. Jemeison, also had a special glass extracting-house erected by the committee, in which they gave interesting exhibitions of the process of uncapping, extracting, and bottling honey, under the public eye, finding a ready sale for their production. One remarkable item at the show which should be noticed was the testimony given by some bee-keepers to their success with the "Wells" system; at the same time, the most prominent bee-keepers gave it condemnation because of its weakness at swarming time, two queens and their workers coming forth when only one part of the hive was ready, and again, because they insisted that a "Wells" hive consisted of two stocks, the workers of which joined their forces in the common attics or storehouses above the separate breeding-houses.

Whilst the Yorkshire show may not be so financially successful this year in consequence of the persistent rain, yet from a bee-keeper's point of view there is cause for the liveliest satisfaction, that thanks to the help of the Yorkshire Agricultural Society and Marshall Stephenson, Esq., their secretary, the Yorkshire Bee-keepers' Association are beginning to reap the harvest slowly and quietly sown by them year by year, in the fact of a distinct unmistakeable advance being perceptible amongst the bee-keepers of the county.

The Rev. J. L. Seager officiated as judge, and made the following awards:—

Most Complete Frame-Hive.—1st and 2nd, W. Dixon, Beckett-street, Leeds.

Most Complete Frame-Hive, price not to exceed 10*s.*—1st, W. Dixon; 2nd, A. C. Jemeison, Dringhouses, York.

Honey Extractor.—1st, W. Dixon; 2nd, A. C. Jemeison.

Honey Extractor, for Sections.—T. Rothery, Sutton, Tadcaster, York.

Exhibit of Bee Furniture.—1st, W. Dixon; 2nd, A. C. Jemeison.

Novelties or Useful Inventions.—1st, A. C. Jemeison; 2nd, W. Dixon.

Observatory Hive, with Bees, Queen.—1st W. Dixon.

Eighteen 1-*lb. Sections.*—1st, Rev. R. M. Lamb, Burton Pidsea, Hull; 2nd, T. Harrison, Driffield.

Twelve 1-*lb. Sections.*—1st, W. Smith, Preston, Hull; 2nd, W. Dixon.

Six 1-*lb. Sections of Heather Honey.*—1st, W. Dixon, Leeds; 2nd, Mrs. Kirk, Easingwold, York.

Twelve 1-*lb. jars Extracted Honey.*—1st, W. Dixon; 2nd, H. Lawrence, East Keswick.

Twelve 1-*lb. jars Granulated Honey.*—1st, W. Chester, Goole; 2nd, J. Woodhead, Hull.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of July, 1894, was £3,049.—*From a return furnished by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

QUEEN-REARING.

DEALING WITH NUCLEI.

[2041.] On reperusal, I rather fear that the tone of my letters may have created an unfavourable impression on the minds of those whose communications to your columns I have attempted to reply to, but I should like all whom I have endeavoured to assist to understand that, in taking upon myself what may appear a monitorial office, I have only done so because I felt the questions put forward were of universal interest to beekeepers generally My remarks in reply have been made, not as criticisms of individuals, so much as of the doings of bee-keepers as a body. In all cases of failure reported in your columns, only a few principal facts can, of necessity, be recorded. There are many reasons for this. "Bees do nothing invariably," we know, but they do a very great many things which even those who devote the whole of their spare time to them, and make (as I have done) a special study of their little ways and means, cannot understand; hence one feels in replying to queries that there are many

details which perhaps the querist himself is unaware of, which, if known, would make the solution of some of the most unaccountable cases clear. In your last issue, C. Harvey (2,033. p. 296) asks for help in making up nuclei, and I will, with your permission, endeavour to elucidate the matter, so far as I can, for the benefit of all interested. But, in order to give some little weight to my observations, I may first say that for the last three years I have made certain branches of the art of bee-keeping my especial study, that of scientific queen-rearing standing first. During the last two seasons I have raised queens by the dozen to that end; this has necessitated the forming of a large number of nuclei, and although I have, owing to the badness of the late season, had to reduce them somewhat, I have still over thirty such nuclei on hand at the present moment. Of these, I am glad to report that many are rapidly advancing to the stage when they will be considered fairly good stocks, headed by some of the finest queens of this year I have ever seen.

Now "C. H." says his queens were reared from larvæ three days old. If this be so, he should indeed be thankful that his nuclei possessed intelligence enough to desert the hives containing such miserable productions as queens made in forty-eight hours. How could he hope to succeed when the development of his queens stand thus:—Egg stage, three days; worker stage, three days; queen, two days, making up the eight days when feeding stops and the cells are sealed! No, friend "C. H.," such a beginning as this, even with the most carefully-made nuclei, could not possibly have been satisfactory.

There are several ways of making up nuclei successfully, and many things to be considered, the primary consideration being that you must of necessity give the bees a *quid pro quo*, or you won't be in it with them. I mean if you take bees old or young from a happy, prosperous home, and place them in a perfectly strange place without the comforts and associations they have been used to, with no inducement for them to stop there, they won't stop—would you?

It may be argued that a queen-cell is an inducement, and no doubt is; but everything depends upon what's inside the cells, and how soon "mother may be expected," &c.

A queen cell *on the point of hatching* will induce a large proportion of otherwise *queenless* bees to stay in a new position; but a cell containing a queen not much better than a worker, and perhaps not due to hatch for a week, is not powerful enough to alienate them for old associates and ties, even though motherless. But if the queen cell be nearly due to hatch, and they have a frame of very young and a frame of hatching brood, along with about three times as many bees as were ultimately wanted, and the operation is carried out in the evening, as many bees will be found in the nucleus after twenty-four hours as are necessary, because bees are very loth to desert young larvæ, and nearly all the nurse bees would stop, besides many of the old ones, and by the time the old bees—whose affection for the old home had taken them back to it—had left, the frame of hatching bees would have furnished quite a nice nucleus, just, in fact, what was wanted.

I do not like the system of confining bees for the purpose of making nuclei; it is an unsatisfactory method, excepting when you have a young queen to give them. The bees then have a very strong inducement to stop where placed, and as I have proved over and over again, are willing to stop, and only go back to their original position through their inability to find the new situation, although I have known bees to vacillate between the two positions, sometimes going to the old, and an hour afterwards going to the new, and doing this for weeks before they were finally lost sight of.

I have one bee that I painted on her back which I have seen quite recently enter no less than five hives, seemingly quite at home with all, and she is now doing "sentry" for a hive almost the farthest from the one in which she first sampled honey. I am certain of one thing, and that is, there is nothing that will induce bees to mark and stay in a new position so much as a laying queen, and my own practice is to take the fullest advantage of this fact, and when I want further nuclei I take the queen of the hive to be divided, all the brood save one frame, and all the bees to a new position, or move the hive bodily, as recommended in B.B.K. "Guide Book," placing a fresh hive on the old position, and giving it the one frame of brood and two or three of food. All the flying bees will go to the hive on the old position, and in twenty-four hours a good queen-cell should be given them.

On no account should they be allowed to rear queens, as they have no nurses in the hive, and you cannot get good queens unless the larvæ be properly nursed. Then in a week or ten days' time this process may be repeated with the original stock, and so on until you have got all the nuclei you require. This method I know is tedious and slow, and where many nuclei are wanted at once, not practicable, but three or four hives so treated when the honey flow is over would generally be enough for most bee-keepers, and it has the advantage of being absolutely safe and sure. So far as I am personally concerned there is nothing I dislike so much as weak nuclei.

Another method I like is to take two frames of hatching brood and one of food and the bees (no queen) and allow them to remain in a box with the lid raised for about five minutes on a warm day, and then carry them indoors, close down, and keep them in a warm room for twenty-four hours. The bees in the box are then all young ones, and at the end of twenty-four hours, if the combs of brood have been well chosen, you will have quite a nice strong

nucleus ready to accept any sort of queen or queen-cell, and guaranteed to stop where placed. The temperature of the room must be regulated by the number of bees which remain, state of weather, &c. If, however, a number of nuclei are required at once, and there are only a limited number of stocks to make them from, there is no very easy or simple mode of getting same; try as you will they are troublesome, and require constant attention and careful watching for four or five days, and if any of them get short of bees they must be made up every evening until enough bees stop, or until sufficient bees hatch out to form a small stock. A great deal of success or failure in making a number of small nuclei from a single stock depends upon the careful preparation of such stock before division. A hive with nine frames of brood ready nearly to hatch and plenty of combs of honey on hand is what is required, and from such a hive last May I made four capital little stocks, which, after twenty-four hours' close watching, stayed where put, and are there now; but before breaking the stock up I placed four queen cells, due to hatch within forty-eight hours, in it, one on every other frame of brood, and after twenty-four hours made my nuclei, and had a young queen at the head of each little stock almost before they had time to "slope off." Thus I gave them the greatest inducement—save that of a fertile queen—to stay where placed. Of course all this entails work and careful attention, and, as intimated before, it does not follow that our most carefully laid plans are bound to be successful, as I have often found that where plans seemed surest (at any rate in bee-keeping) I have more often than not found them most unsatisfactory, and when this is so, I go to a quiet part of the garden and just "think it out," with the result that, like friend "C. H.," I determine not to be done, but to try again.

I have had as many failures as most people along the path I have chosen to tread, but I can assure your readers that from my successes I have learnt but little, while from my failures I have learnt, well, all I know of practical and scientific bee-keeping.—HENRY W. BRICE, *Beulah-road North, Thornton Heath, Surrey.*

A BEGINNER'S TROUBLES.

[2042.] I began bee-keeping last year, buying a hive and a strong stock of bees, and got about 20 lb. to 30 lb. of honey. Before the summer was over, however, something seemed to go wrong with them; they would not go into the supers, and seemed to rapidly diminish in numbers. I thought that I had perhaps accidentally destroyed the queen. I packed them carefully for the winter, but when the spring arrived, as no bees came out, I opened the hive, and found it full of dead "drones." I don't think there was a single worker bee among them. There was plenty of honey, but the combs were dirty and mildewed. 1. Do you think I had killed the queen?

One or two bee-keepers (men who have kept bees for years) came and examined the hive, and declared they had never seen anything like it before. After examining the combs, they assured me that there were no signs of foul brood, and that I might safely use the best of the combs if I got a fresh swarm. So I bought another strong hive, and in due course got a swarm from it, which I put into the old hive with the old comb. The bees accepted the hive, but did not seem to work properly, so I took out some of the old combs, and replaced them with sheets of foundation; they then began to work and the queen to breed. She had hardly laid any eggs up to this time, though the swarm had been some time in the hive—indeed, I am not sure that she had laid any eggs at all before I removed the combs. After the new combs were built out, the strength of the colony increased very much, and I put supers on, but not a bee would go into them. So a few days ago I thought I would see if anything was wrong, and on examining I found signs of foul brood in two frames. The worst one I burnt at once, but I left the others, as there were only a few cells tainted. I had never seen the disease before, and as the comb was full of healthy larvæ and sealed-up brood and sealed honey, I did not like to destroy this. The disease has increased, I am afraid, on this comb, but it has not attacked any others so far, and I find the bees have pulled out the foundation I gave them about three days ago, and the queen has filled it with eggs.

I have been studying the "Guide Book" to find out what to do. I see several remedies are named, but I cannot make out which, under the circumstances, I ought to try. Can you help me? 2. I have not a spare hive to move the bees into, and I hardly like to buy a new one for the purpose or I may taint it. I have three other stocks of bees, and I am afraid the disease will now find its way into all of them. 3. The bees of the hive from which the swarm came won't go into the supers; they have killed the drones, and do not seem to be doing anything, nor does the hive look full as it did. I cannot open this one as the comb has been built in all directions and the frames won't come out. What ought I to do with this hive? 4. I have forgotten to mention that when I examined the combs of the hive that died out last winter I found a large number of fully-formed bees dead inside the sealed-up cells, and I suppose this is why the new swarm did not take very kindly to the combs, and I imagine this is what has started the foul brood, or was it foul brood that killed the colony last year? I have not yet been able to find the queen in any of my hives, and I cannot understand why. I think I know what she ought to be like.—S. D. K., *Weston-super-Mare.*

[1. Without knowing what amount of "manipulating" was indulged in by yourself, we can hardly judge whether you have killed

the queen or not; but the symptoms show conclusively that the stock became queenless in the autumn of last year. 2. It is the greatest folly to save old combs—with dead brood in the sealed cells—for use with swarms, nor can we understand any bee-keeper of experience advising such a course. Supposing that you are right in declaring there is foul brood in the hive, it is too probable that the brood now being reared will develop the disease later on; if it does, the whole of the combs had better be removed, and the bees compelled to build new ones from full sheets of foundation. They will require feeding while the combs are being drawn out, and naphthaline should be placed in all the hives as a preventive of infection. Refer also to B. J. for June 21 last (p. 241). 3. It is quite a common occurrence for the bees of swarmed stocks to refuse to enter supers, for the simple reason that they are so reduced in numbers through swarming as not to need surplus room. We fear you will require more experience in bee-work before undertaking the task of straightening the misshapen combs referred to. 4. Without a more intimate knowledge of the facts, we cannot say with any certainty "What killed the colony last year," but it was—as we have said—most unwise to use combs for the swarm with rotting dead brood in them.—EDS.]

WANDERING QUEENS.

A CURIOUS INCIDENT.

[2043.] I send you the following, on the chance that it may interest some of your readers, and elicit some kind criticisms:—

1. About three weeks since, my attention was called to a small knot of bees on my lawn in front of the three-frame bee-hives I kept there. I soon discovered that the lumps of some two dozen bees were apparently "balling" a queen. After trying in vain to free her and give her her liberty (as I did not think she came from any one of my hives), and after losing her once, only to find shortly that she was being "balled" worse than ever, I at last captured herself and her companions in a tumbler, got ready a spare hive, inserted her and them under excluder zinc, transferred above it two lifts of shallow frames from another hive full of bees on frames of honey and (through a defect in that hive) brood in all stages, and left the whole arrangement to settle down. All went well, and it is now one of my most promising hives.

I think this was a stranger queen come to mate with one of my drones. I found one close by her in a very excited and apparently unhappy state, but had no time to do more.

Can any one throw any light on this curious experience? It is any easy way of getting another hive, but I should suppose it is an incident of rare occurrence.

2. It occurred to me some time ago that it would be a great advantage if I were to fit a pane of glass flat on the top of the frames or sections in my hives, so that I could inspect the state of affairs by simply raising the overlying quilts, without opening the hive or disturbing the bees each time.

I accordingly procured some sheets of glass, 17 in. by 15 in., accurately squared and cut (smaller for the section-crate), and dropped them in. The comfort and convenience have been immense. I can examine the bees at any time, and show them to others, without the slightest inconvenience. The bees have become so accustomed to the lifting of the coverings that hardly one stirs, unless I keep the light on too long; and I believe it has made them much tamer whenever it becomes necessary to open the hives. They appear to work in perfect comfort close up to the glass. There is a slight crevice all round, which perhaps affords sufficient ventilation through the quilts put on above all.

Shall I be able without detriment to the bees to continue this arrangement all through the winter? It would be invaluable in allowing one to see at a glance at any time, without letting any cold air into the hive, or upsetting the bees, what the exact state of affairs was.

I shall be glad to know if any one else has tried the plan, and if it succeeds.—W. R. N., *Sussex, July* 31.

BEES AND RED CLOVER.

[2044.] In a characteristic article by "Ouida," published in a popular monthly for June, this sentence occurs:—

"As well call sterile the red clover, which yields its fecundating pollen to the bee in the glad sunlight of a summer day!"

You have, I believe, stated in the B. B. J. that the "English bee does not work on red clover." Has "Ouida" made a mistake in her statement, or does the quotation I have taken from your columns refer solely to the bees' power of extracting honey from this clover?—E. H. HOPKINS, *Bromsgrove.*

P.S.—May be wrong in attributing the above quotation to your pen, but I fancy not.

[We fail to see that "Ouida" has made any "mistake in her statement." The ordinary hive or honey bee, *Apis Mellifica*, is not in any way specifically alluded to in the extract quoted, and, as red clover is almost, if not entirely, fertilised by the common bumble bee, the authoress mentioned has in no way erred in her reference to a well known fact. We cannot call to mind having written the words attributed to us by our correspondent, but it is generally admitted that the hive bee does not work on red clover, except on very rare occasions and under exceptional conditions.—EDS.]

TAKING BEES TO HEATHER.

[2045.] May I give a little of my experience in taking bees to the heather in reply to "Annoné" (2025, p. 294)? The sort of zinc

named would be more of a hindrance than otherwise. If the bees are strong in numbers they will protect themselves; if weak, reduce the entrance. But always have them as strong in supers as possible. They will take no harm under the farmer's care, but it will be a great mistake to send the hives with entrances covered with zinc of so large a mesh as to let the bees get their heads through; many bees will have no heads left on if this is done. The main point is to have lots of ventilation at the top during the journey, and even with this I have seen a good many breakdowns in my time. I have often thought it would be a great improvement in hives for the heather if ventilation could be given in every story, with a wood slide to cover it down in cold weather.

I notice there has been a lot of talk for and against the "Wells" hive in your pages, and as my contribution to the subject, I would just say I had the pleasure of looking after a "Wells" last summer for a gentleman who has now gone to Africa, and it certainly did better in honey returns than any other three he had. It weighed 159 lb. at the end of the heather season last year, and stood far above any out of forty hives at the time.—J. B. R., *West Cumberland, July* 30.

WEATHER REPORT FOR JULY, 1894.

WESTBOURNE, Sussex.

Rainfall, 5·38 in.	Sunless Days, 3.
Heaviest fall, 1·80 in. on 29th.	Below average, 5·49 hrs.
Rain fell on 20 days.	Mn. Maximum, 65·4°.
Above average, 2·50 in.	Mn. Minimum, 53·4°.
Max. Temperature, 82° on 1st.	Mean Temperature, 59·4°.
Min. Temperature, 46° on 14th.	Maximum Barometer, 30·58° on 1st.
Sunshine, 192·3 hours.	Minimum Barometer, 29·46° on 12th.
Brightest Day, 5th, 15 hours.	

Very little honey. Average number of swarms.

L. B. BIRKETT.

Echoes from the Hives.

Whitehill, Rosewell, N.B., August 1.—The weather has been grand for the last week. Limes just blooming, and I hope to have a better average than expected, probably 30 lb. per hive instead of 10 lb., as given in my last letter.—HY. MARRS.

Wadebridge, August 2.—The weather for the last month has been very unfavourable for the honey harvest, though, on the whole, I cannot complain. Owing to want of time, am obliged to reduce my stock; in order to assist reduction, a large swarm issued from one of the hives yesterday, August 1, leaving from 30 to 40 lb. of sealed honey in super of shallow frames. I am not selling part of my bees because bee-keeping does not pay; it has paid me very well, thanks to your valuable BEE JOURNAL.—H. LANDER.

Burntfan Gardens, Durham, August 5.—You will be pleased to hear that, on the whole, this has been a very good year for the bees in this neighbourhood. Honey is plentiful, it seems, and my takings up to date have been—from No. 1 hive 39 lb.; No. 2, 20 lb. (all 1-lb. sections). I am very well satisfied. Bees are doing well yet, and we have the heather before us.—R. BLACK.

Queries and Replies.

[1122.] *Mishap to Queen.—Requeening.*—1. Would you kindly inform me how long it takes for a cast to settle down with one queen only? A very strong cast (a top swarm and cast in one) was hived and several queens seen. Ten days after we found a queen on the ground in front surrounded by bees. We lifted her and found that one of her wings was defective and that she could not fly. We placed her on the alighting-board and she ran in. I fear we have committed a mistake. Do you think she would be an extra queen thrown out, or the queen of the hive? Is it likely that the bees would be destroying surplus queens ten days after being hived? 2. Would it be of any use to introduce a fertile queen without first capturing the other? I am anxious to preserve the cast, as it is a very strong one, and we have the prospect of a good heather harvest.—K. FRASER, *Largs, Ayrshire.*

REPLY.—1. When several young queens are seen with a swarm the question of "survival of the fittest" is usually decided by the second day after hiving. The circumstance related is moreover so unusual that the combs should be examined to see if the queen is still there and laying. 2. No, if there is a queen in the hive she must be removed before introducing an alien.

[1123.] *Swarms from Swarms: a Disputed Point.*—Will you kindly give me your opinion to the following in your valuable journal, in order to settle a dispute in regard to a swarm of bees supposed to have issued from a swarm hived eight days previously:—1. Is it possible for two queens to work together in a straw skep for eight days, and then of themselves break up into two lots or "casts," which are then put alongside of each other as close as 18 in., and work as if they had come forty miles apart? 2. Did you ever hear of a cast swarming when it was only eight days hived?—C. McG., *Campbeltown, N.B.*

REPLY.—1. Without venturing to declare what is "possible" in bee-keeping, we may

say it is very improbable indeed that such a thing could occur as is set forth in the query above. The chances are, we should say, about as remote as possible against it. 2. No; nor has any one else, we fancy.

[1124.] *Transferring Swarm from Skep.*—On June 10 I had a swarm of bees, and not having a frame-hive by me at the time put them in a skep, where they have since remained. I have now bought a fresh hive. 1. Would it be right for me to transfer them to it seeing they are working well in the skep? 2. Is now or about end of August the best time to transfer?—LANCASHIRE NOVICE, *Lowton.*

REPLY.—1. In deciding to transfer the bees and combs to frame-hive there is the risk, especially to a "novice," of bringing about disaster, which would not be likely to occur if the bees had been left in their first home, or if the help of an experienced bee-keeper could have been enlisted. 2. It is not a very difficult operation to transfer bees and combs as proposed, yet we do not like to recommend it for a "novice." The stock will probably be safe if left where it now is and will winter well. If transferring is decided on and attempted it may end in disaster. Under the circumstances we should recommend getting the advice of some one experienced in bees, who could examine the stock as it now stands and report safely on the expediency or otherwise of disturbing it. The beginning of September would be the best time for transferring, if it be decided on.

[1125.] *Bees Destroying Queen-Cells in Nucleus Hive.*—Would you kindly tell me if these enclosed dead brood are queens or not? They have been thrown out from a nucleus I made a few days ago. There were about six queen-cells in the combs (three in number), and quite sufficient bees remained to take care of them and the brood, which is coming out well. I am afraid there can be no queen in the hive if these are young queens; if so, what can be the reason of their all being thrown out? I have not seen anything like them thrown out of the other nuclei, and all the queen-cells were open two days after I made this nucleus.—F. FOX, *Epsom, August* 2.

REPLY.—Whether brood sent were queens or not it is impossible to say, for what we received was brood in the nymph stage, we suppose, but smashed to pulp in post and entirely beyond recognition. We could not even count them. Bees do sometimes refuse to accept queen-cells, and tear them down, as in this case; but the reasons why can usually only be made clear by the operator himself. Please refer to Mr. Brice's letter on nuclei, (p. 313) which may help you.

[1126.] *Transferring Bees from Skeps.*—Referring to reply 1116, p. 306 of last issue, 1. Would it not be well to transfer the bees at once, provided "foundation" is used instead of the combs in the skeps? 2. I am two miles from the heather; is it worth while to move my hives there? 3. Do not "honey squeezers" waste much honey by mixing it with wax? 4. I have a quantity of granulated clover honey from last year in sections. What is the best use that I can make of it?—CYMRO.

REPLY.—1. If the combs containing brood be not transferred, a large portion of the young bees, so valuable for wintering, will be sacrificed. 2. Yes, if the heather is yielding well. 3. They are not of much use in an apiary of more than one hive. 4. Cut the combs up, put in an earthenware vessel, and insert the latter in a pan of water hot enough to melt honey and wax. When melted, allow it to cool; the wax may then be lifted off the liquid honey in a solid cake.

[1127.] *Will Bees of Run-away Swarm Return to Hive?*—I had a strong stock in frame hive, where the roof only permitted one rack of twenty-one sections. I did not want a swarm, and as the hive did not permit a second rack, I removed each separate section as finished, supplying empty ones fitted with foundation. Without previous warning, and with plenty of empty comb in brood-nest, a large swarm issued on July 31, which my wife hived by shaking into a straw skep placed on a table near over the orthodox white cloth. About half the bees returned to the branch where they first settled, 8 ft. from the ground, so she took the skep and fixed it over the bees, loosely hanging a white cloth over all, but they never took possession, and about 4.30 flew away. I have not been able to find the swarm, and the two following days were very wet; but even during the rain bees were noticed entering the hive all through the second day. This causes me to ask:—1. If swarm was not hived, would bees be likely to return to old hive? 2. The stock being weakened, ought I to remove sections at once, or leave them to be finished, feeding afterwards? 3. To prevent a cast, should I remove all queen-cells but one? or, as it is now getting late, ought I to cut out all queen-cells and introduce a fertile queen. 4. If I allow the bees to raise a queen in the natural way, how long will it be before she commences to lay? and will the stock dwindle in consequence, as it is now getting late in the season?—T. H., *Manchester, August* 3.

REPLY.—1. The probability is that some one has tried to secure the swarm, and made a bad attempt to hive it; this being so, it is more than likely that the bees observed were part of the swarm returning to the old home. 2. There can be no harm in leaving the sections on till the honey harvest ends, if it has not done so already. 3. If a cast is coming off, "piping" will be heard by placing the ear close on to the hive cover on the evening of

the 8th or 9th inst., and it will be both easier and safer to let the cast issue, and cut out queen-cells before returning it to the parent hive on the evening of the same day. 4. Take the course advised above; it is scarcely worth troubling about a fertile queen so long as drones are about.

[1128.] *Feeding Back Honey Taken from a Tree.*—I am sending a piece of comb which I lately took with a stock of bees from a tree in which they had been working for four or five years. I put the bees on comb foundation and left the old combs in a basket four or five days; to-day I had a look at them, and they look suspicious. Please say if it is foul-brood or not, as I have some honey I took from them and I thought of feeding another stock with it to help them finish off some sections. F. W. Morey, *Ventnor, Isle of Wight.*

Reply.—Though the precaution is fortunately unnecessary in this case, we are very pleased you were careful enough to make the inquiry, so risky is it to give healthy bees honey taken from stray bees located in trees. There is no trace of foul-brood in the comb sent.

[1129.] *Straightening Misshapen Combs.*—I have lately come into possession of a home-made frame-hive. There are a large number of bees in it on ten frames, which have not had any foundation in them, and all the combs are built every way but the right way, and are fastened to each other and to the sides of the hive. The person from whom I bought it had once made an attempt to get the combs out, but has broken some of them, and, being stung, left the broken combs in the bottom of the hive. I wish to put everything ship-shape and in workable order. Will you kindly state in detail how I ought to proceed?—J. W., *Northampton.*

Reply.—It will be absolutely necessary to get the opinion of some experienced bee-keeper, who could inspect the hive, and have some knowledge of our correspondent's competency to undertake so difficult a "bee-job" as the above, before giving advice "how to proceed."

Bee Shows to Come.

August 10 and 11.—At Dumfries. South of Scotland B.K.A. Very liberal prizes.

August 16.—At Audlem, Cheshire. Liberal prizes for honey and beeswax.

August 16.—At Maidenhead, Berks. Show of honey, bees, and appliances. Windsor District, Berks B.K.A., in conjunction with the Maidenhead Horticultural Society. Over £7 value in prizes. For schedule apply to hon. sec., W. S. Darby, Consort-villas, Clewer.

August 22 and 23.—Shropshire B.K.A. Annual show in connection with the Horticultural Society's great fête in "The Quarry," Shrewsbury. £35 in prizes for bees, honey, hives, and appliances. For prize-lists, &c., apply T. Whittingham, Upton Magna, near Shrewsbury.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

August 23.—At Madresfield, in connection with the Madresfield Agricultural Society; fourteen classes for bees, hives, and honey. Entries close August 18. Rev. E. Davenport, hon. sec, Burlish Lodge, Stourport.

August 29 and 30.—Annual show of the Staffs. B.K.A. At Stone. In connection with the Staffs Agricultural Society's meeting. Nineteen classes for bees, hives, honey, &c. Harold Twentyman, sec., Wolverhampton.

September 4 and 5.—At Coventry. In connection with the Warwickshire Agricultural Show. Annual show of the Warwickshire B.K.A. Liberal prizes for honey, bees, and appliances. For schedules apply J. N. Bower, hon. sec., Knowle.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1-lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

September 12 and 13.—Scottish Bee-Keepers' Association, in connection with the show of the Caledonian Horticultural Society, Waverley Market, Edinburgh. Schedules ready shortly. John Wishart, assistant secretary, Castlecraig, Dolphinton, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries close September 11. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

South Wold (Boston).—1. Stocks before packing away for winter should have about 20 lb. of food in store to carry them safely over till the following spring. There are various forms of feeders on the market, but a wide-mouthed jar or bottle will serve the purpose. 2. An eight-framed hive is too small if the frames are of standard size. 3. A sunny aspect is the best for hives in winter.

W. B. (Maidstone).—1. The bees had best be driven as soon after end of this month as the owner will allow. 2. Queens may be left to settle which queen is to reign unless an extra good one is worth specially saving. 3. Ordinary wheaten flour is used in uniting.

HARTWOOD.—There is certainly an admixture of honey-dew in sample sent, which spoils both colour and flavour. We should give it back to the bees as food.

W. A. BALCOMBE (Faversham).—*Bees in Skep Refusing to Work Down into Frame-Hive.*—The bees have required no additional room since the skep was placed on the frame-hive, hence their refusal to work down into it. We should advise wintering the bees in the skep as they are, instead of driving and transferring, with all its attendant risks.

PORTMAN (Berks).—*Securing Worker Bees to Send with Queen.*—If queen is got into a small box (say a match-box) beforehand, there should be no difficulty in running a dozen workers into the cage by sliding it open across a comb. Then, when the required number are trapped, open the box over the aperture and let the queen join them.

T. B. (Stafford).—Feed at once to get the foundation drawn out. Swarms usually return to hives because the queen is not with them.

T. KIRWAN (Dunmore).—*Bees Working on One Side of Foundation Only.*—One side of foundation has been left unworked by the bees in section received apparently because of their not having free access to the unworked side. Without an inspection of the section rack we can only suppose that the mischief occurred in outside sections only, and in these it is well to cut a single "pop hole" in one corner of the sheet of foundation, or turn the section round when one side is found to be neglected by the bees. It is also better to adopt the four bee-way section when full sheets of foundation are used.

G. WILLIAMS (Essex).—*Claim for Damage in Hiving Swarm.*—We do not quite know what is expected of us by our correspondent's letter. No question is asked as to what we think should be done, but details given of what took place in trying to hive a swarm in a neighbour's garden after permission to enter had been granted. Judging from what appears in the letter before us, there is good ground for refusing to pay the 13s. 6d. demanded in the "lawyer's letter." So, if our opinion be what is wanted, we offer it for what it may be worth.

"IN DUBIIS" (Bognor).—Honey received is from various flowers, and has no pronounced flavour to fix its main source. It is not a high-class honey, but fairly good for home use. Being a little unripe, it might ferment if kept long.

Several reports of Shows, Letters, &c., are in type, and will appear next week.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

THIS SEASON'S HONEY, in bulk. What offers? Sample free. BIRD, High-street, Daventry. E 68

OFFERS WANTED for Worked-out SECTIONS, with or without crates. ROSE, Feltham. E 72

FOR SALE, Three Strong, Healthy STOCKS of BEES, in Frame Hives. Also two Stocks in straw skeps. LADY CAVE, Ashby-de-la-Zouche. E 69

HEALTHY DRIVEN BEES. 1s. 3d. per lb.; in 5-lb. lots. Boxes to be returned. ED. LONG, Cottinham, Cambs. E 70

HEALTHY DRIVEN BEES, 1s. 6d. per lb. for 4 lb. lots or over, Queen included; packing free. F. GAY, Edmondsham, Cranborne, Salisbury. E 71

FOR SALE, Strong Healthy STOCKS of BEES for the Heather, in Combination Hives, one Observatory Hive. H. LANDER, Alandale, Wadebridge, Cornwall. E 65

BEES for SALE, at sacrifice, as they must be moved. Five Stocks, in superior Bar-framed Hives, and 1 in straw skep, with season's produce, and all necessary appliances. RUSSELL, Upton Park, Slough. E 66

FOR SALE, Young Fertile Native QUEENS, 3s. 6d. each. Also strong Stocks of Healthy Natives, with young Queens on Standard Frames, with or without hives. H. WITT, South Ascot, Berks. E 67

GUARANTEED Healthy 1894 FERTILE QUEENS 3s. 6d. each; safe arrival. DRIVEN BEES, 1s. 6d. per lb. for 5-lb. lots or over, Queen and Packing included. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. E 64

FOR SALE, cheap, owing to owner leaving the country, 12 STOCKS BEES, and an equipment replete with every modern accuracy. Write for particulars. This is an opportunity not to be missed. FRANCIS JONES, Mullinabra, Waterford. E 64

HEALTHY DRIVEN BEES, with Queen, 1s. 6d. per lb. Packing-box returnable. GARNER, Broom, near Biggleswade, Beds. E 64

BEES for THE HEATHER—Guaranteed healthy Nuclei, 3-Frame 8s.; 4-Frame, 10s.; 5-Frame, 12s. Also NEW HIVES for THE HEATHER at 8s. 6d. Apply, J. TREBBLE, Romansleigh, South Molton. E 55

LACE PAPER for GLAZING SECTIONS. Four neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

FOR SALE, good STOCKS BEES, guaranteed healthy, with young queens. Apply, F. GAY, Edmondsham, Cranborne, Salisbury. E 61

SECTION CASES, for Exhibition, glassed both sides, 18s. per gross; 1s. 9d. per doz. J. S. GREENHILL, 80, Graham-road, Wimbledon.

HONEY.—Finest White Clover and Heather HONEY WANTED. Post samples and lowest prices, stating quantities. SPRING, Brigg, Lincs.

MARKET for SECTIONS, EXTRACTED HONEY, and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

CHOICE YOUNG QUEENS, excellent strain, produced by seven years' careful breeding, guaranteed fertile, post free 5s., virgins, 2s. 6d. Rev. C. BRERETON, Pulborough, Sussex. 229

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

Editorial, Notices, &c.

USEFUL HINTS.

(*Concluded from p.* 311.)

REMOVING SURPLUS HONEY.—The unusual lengthening out of the honey season of '93, and the many indications of a similar late gathering this year, will no doubt have induced many bee-keepers to defer taking off still unfinished surplus-chambers long after the usual date of their removal from the hives. But, seeing that mid-August has now passed, it becomes necessary to bear in mind that sections and frames of sealed combs in the unfinished condition named may have a considerable portion of their contents carried below into the brood-chamber by the bees themselves if left on the hives for a couple of days after the honey flow has really ended for the year. In view of this, and the fact that the honey season is now practically over—in all but heather districts—all surplus intended for removal should be at once got quietly from the hives and taken indoors. We use the word "quietly" because of our constantly including among our readers those who are so entirely new to the craft that we deem it of the utmost importance to them that their first "taking" of honey should neither be an unpleasant event to themselves or to their neighbours. Only a day or two ago a beginner of this year wrote us congratulating himself on having been able to take the honey—including some frames from the brood-nest—from his single hive in his dinner hour, without veil, or smoke, or stings; but on returning home at night found himself threatened with pains and penalties—including the poisoning of the bees if he did not remove them—because an unfriendly neighbour's goat had been stung by a bee!

Our correspondent appeals to us to know (1) if he can be compelled to remove his bees because of the goat sting? and (2) can he sue for damages if his bees are poisoned? We would much rather have been asked, "What can be done to avoid such mishaps in the future?" because to keep bees in close proximity to neighbours who are neither agreeable in themselves nor look with friendly eyes on the bee-hive, may very easily be a constant source of friction and annoyance to all concerned. Under such circumstances, however, a policy of conciliation is better than fighting, either through the law or any other way. It is also due to the neighbour that every reasonable care be taken to prevent annoyance from the bees, and this brings us to the point, because, if proper care *is* taken in removing honey, there is no reason why it should not be got from the hives without the smallest upset either to the temper of the bees, the bee-keeper, or the irate neighbour; and, as briefly as we can tell it, this is how it may be done:—1. Provide a "super-clearer," know how to use it, and do the work at the proper time; bearing also in mind that we are especially referring to cases where annoyance to others than the bee-keeper is to be carefully avoided. 2. Choose a fine morning and begin at 6 a.m., before any one is about; have every requirement ready to hand as wanted; don't smoke the bees at the entrance, but quietly remove roof and "lifts"—when such are used—so as to leave the junction of surplus-chamber and lower hive exposed and free for "getting at." Gently prize up one corner of the surplus-chamber with the point of a screw-driver (we use a common oyster-knife for preference), so as to insert a small wedge about ½ in. wide—a bit of a broken section is just the thing—do the same at each corner, when, although the surplus-chamber is raised, no bee can escape, give a puff of smoke in at the junction on all sides, to slightly alarm the bees, and after a screw-like movement, which severs any brace-combs if there are such, quietly take off the surplus-chamber and set it down on the "lift," which allows space below and prevents crushing bees. If the bees now exposed on tops of frames are quiet, set on the super-clearer; if they are not, give a puff of smoke to make them so; and, after another puff below the surplus-chamber, lift the latter, set it on the clearer, and the job is complete. If properly done, and all jolting and jarring of the hive avoided, not a bee will have taken wing, and the bees of the brood-chamber will be unaware of what has taken place. In the evening—or next morning if the surplus-chamber is not entirely free from

bees—the honey is lifted off the hive without disturbance. In a word, trouble over the removal of honey is, or ought to be, a thing of the past.

We have dealt with the removal of honey by the use of smoke only as a bee-quieter, because of noticing since the above was written that our correspondent, Mr. W. Woodley, on another page, has fully described the use of carbolised cloths for the same purpose.

TAKING HONEY FROM BROOD-NESTS.—After all that has been proved against the unwisdom of disturbing brood-chambers for the purpose of stripping them of most of the available food they contain in autumn, one would have thought that no further argument was needed to put a stop to the practice; but there still keeps cropping up bee-keepers who deem it the best of "management" to get all the honey they can from the bees so long as syrup is given in return. No greater mistake, however, could be made; there is no profit in it; the labour involved is worse than thrown away, for it wastes the strength and the energies of the bees at a time when both should be conserved for the work of another year. It is bad enough to have to feed when brood-nests are found almost bare of food in autumn; but to undertake the labour of emptying the nicely-sealed combs of natural food, and inflict on the bees the work of refilling them, with all the attendant risks of feeding, is little less than folly, whichever way it is looked at.

UNITING IN AUTUMN.—This is another point requiring attention. It is no use trying to carry over the trying winter-time stocks with too few bees in them to stand against a fortnight's frost. Now is the time, therefore, to think about deciding what lots are to be "joined up" at the end of next month, and to gradually bring them closer together so that they may occupy stands as nearly touching as maybe before the actual uniting takes place. Hives from which two or more swarms have issued will also need seeing to, both as to the number of bees they contain and the fecundity or otherwise of the young queens in them. If either are unsatisfactory, a small late-swarm—which has not made much progress in comb-building or food-storing—may be added to the old hive during next month to the advantage of both. In fact, what remains of the season may be usefully employed first in thinking out what uniting is required, and, when this is decided, no time should be lost in feeding, preparatory to the actual "packing-up" for the winter time now so rapidly approaching. The sooner the bees are quieted down the better, for all the work and worry saved to them in the late autumn is, as we have said, so much strength conserved for next year's labour.

GOOLE AND DISTRICT BEE-KEEPERS' ASSOCIATION.

The annual show of the above society was held in connection with the Goole Flower Show, in the Victoria Pleasure Grounds, Goole, on Thursday, July 26, and the meeting was favoured by Queen's weather. Several prominent exhibitors in the north of England competed, and a fair quantity of honey was staged, local exhibitors fairly well holding their own against their powerful opponents. Sections were only moderate in both quality and quantity, but the extracted honey classes were well filled with good samples. Mr. J. H. Howard, Holme, Peterborough, was the judge, and during the afternoon delivered a lecture to a large and interested audience.

The prizes in the open classes were offered by the Goole Horticultural Society. Awards:—

Open Classes.

Observatory Hive.—1st, W. Chester, Goole.

Six 1-lb. Sections.—1st, Mrs. Rimmer, Knedlington, Howden; 2nd, J. Giddy.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Smith, Preston, Hull; 2nd, W. Dixon, Leeds.

Most Interesting and Instructive Exhibit.—1st, W. Dixon.

Two Frames of Comb Honey.—1st, Dr. Arbuckle, Thorne; 2nd, W. Smith.

Members' Classes.

Six 1-lb. Sections.—1st, Mrs. Rimmer; 2nd, Dr. Arbuckle.

Six 1-lb. Jars Extracted Honey.—1st, Dr. Arbuckle; 2nd, W. Chester.

Super of Comb Honey (not Sectional).—1st, Dr. Arbuckle; 2nd, E. Wainman, Howden.

Two 1-lb. Sections and Two 1-lb. Jars Extracted Honey.—1st, Mrs. Rimmer; 2nd, W Ramsey, Rawcliffe.

Three 1-lb. Bottles of Granulated Honey.—1st, A. Woodhead, Goole; 2nd, W. Chester.—(*Communicated.*)

SHOW AT LLANEGWAD, SOUTH WALES.

The annual show of the Llanegwad (Carmarthen) Horticultural Society was held on the 25th ult., in the grounds of Alltyferin (close to the mansion) by permission of E. H. Bath, Esq., president. In addition to the

usual display of flowers, &c., there was included for the first time a department for honey, and Mr. A. Hamer, of Llanarthney, who acted as judge, also delivered a lecture on bee-keeping, which attracted quite a number of interested listeners. As a first attempt, the honey show was a success, some very excellent samples being staged, Messrs. J. Taylor and Lewis taking first and second prizes, in the order named, for both sections and extracted honey.—(*Communicated.*)

SHOW AT BLANKNEY, LINCOLNSHIRE.

The annual show of the Blankney Horticultural Society was held on August 1, by permission of the Right Hon. H. Chaplin, M.P., in the private grounds adjoining the Hall, and included amongst its attractions an excellent display of honey, wax, and bees—this portion of the show being under the auspices of the Lincolnshire Bee-Keepers' Association. The bee-tent of the association formed a great attraction, lectures being given in it during the day by Mr. F. J. Cribb, of Gainsboro', and as both a skep and bar-frame hive of bees were provided, the advantages of the modern system were readily illustrated. Mr. R. Thorpe, of Swineshead, judged the honey, the awards being as follows :—

Best Observatory Hive.—1st, J. Coulson ; 2nd, R. Godson ; 3rd, J. Emmerson.

Best 12 *Sections.*—1st, R. Godson ; 2nd, G. Godson ; 3rd, A. Barnes ; 4th, Mrs. Taylor.

Best 12-*lb. Jars Extracted Honey.*—1st, A. Barnes ; 2nd, J. Taylor, jun. ; 3rd, H. Bancks ; 4th, A. Weatherhoff.

Best Six Sections (*Cottagers only*).—1st, A. Barnes ; 2nd, J. Coulson ; 3rd, Mrs. Taylor.

Best Six 1-*lb. Jars* (*Cottagers only*).—1st, Mrs. Taylor ; 2nd, W. Phillips ; 3rd, A. Barnes.

Best Glass Super (*not under* 10 *lb.*).—1st, J. Hammond ; 2nd, W. Baker.

Best Beeswax.—1st, T. Hawley ; 2nd, J. Emmerson ; 3rd, A. Barnes.—(*Communicated.*)

DERBYSHIRE BEE-KEEPERS' ASSOCIATION.

The Derbyshire Beekeepers' Association had classes for honey, &c., at the Draycott and Wilne Floral and Horticultural Societies' show on Saturday, August 4, where Mr. Chas. Wootton gave an interesting lecture and demonstration in the bee-tent on behalf of the Derbyshire County Council in quite a heavy fall of rain ; but the public evinced so much interest that the tent was crowded with attentive listeners all the time.

Mr. Arthur G. Pugh, Hon. Sec., N.B.K.A., acted as judge, and gave following awards :—

Best Six 1-*lb. Sections and Six Jars of Extracted Honey.*—1st, Ch. Wootton, Draycott ; 2nd, H. Hill, Ambaston.

Best Twelve 1-*lb. Jars Extracted Honey.*—1st and 2nd prizes divided between W. Southall, Borrowash, and J. Smith, Long Eaton ; 3rd, W. Coxon, Ambaston.

Best Observatory Hive with Bees and Queen.—1st, Ch. Wootton. –(*Communicated.*)

NORTHAMPTONSHIRE BEE-KEEPERS ASSOCIATION.

The annual show of the above association was held on Bank Holiday, August 6, and following day, in Delapré Park, Northampton, and proved to be one of the best ever held by the association.

In the open class for single jar of honey over sixty exhibits were staged on step staging, making a remarkably fine and attrac tive display, the like of which had neve before been seen in this county. Mr. A. Hamer's two exhibits were awarded second and third prizes, but the rules precluded one exhibitor taking more than one prize in any class.

Mr. James Adams, West Haddon, was awarded a special prize for a case of twelve sections and ten shallow frames.

Special mention should be made of some very fine glass sections exhibited by Mr. A. Siddons, of Wellingboro'.

The duties of judging were undertaken by Messrs. W. Winterton, Wellingborough ; J. Perry, Banbury ; and J. R. Truss, Ufford Heath, Stamford, who placed the awards as follows :—

Best Twelve 1-*lb. Sections.*—1st, O. Orland, Flore ; 2nd, C. Cox, Brampton ; 3rd, James Adams, West Haddon ; 4th, Thos. Salmon, Brackley.

Twelve 1-*lb. Jars Extracted Honey.*—1st, Lewis Jordan, Holdenby ; 2nd, W. Tustain, Farthinghoe ; 3rd, James Adams ; 4th, Chas. Wells, Oxendon ; H.C., O. Orland.

Six 1-*lb. Jars Extracted Honey, any year.*—1st, C. Cox ; 2nd, H. Collins, Berry Wood ; 3rd, J. Adams.

Best Exhibit of Super Honey.—1st, W. Tustain ; 2nd, H. Williams, Overstone ; 3rd, C. Cox.

Beeswax.—1st, W. Tustain ; 2nd, O. Orland ; 3rd, J. Adams ; 4th, H. Collins.

(*Non-Previous Winners Only.*)

Six 1-*lb. Sections.*—1st, A. Siddons, Wellingborough ; 2nd, G. H. Wright, Thornby ; 3rd, T. Meacock, Flore.

Six 1-*lb. Jars Extracted Honey.*—1st, E. Underwood, West Haddon ; 2nd, Silas Cole, Althorp ; 3rd, C. Wells ; 4th, A. Brayshaw, Brixworth.

Best Super. — 1st, Mrs. O. C. Hollis, Boughton ; 2nd, A. Siddons.

1. (*Open.*) *Special Prizes.* — *Best* 1-*lb. Jar of Extracted Honey.*—1st, W. Tustain ; 2nd, A. Hamer, Llanarthney ; 3rd, E. Underwood, West Haddon ; 4th, W. Litchfield, Muscott ; 5th, E. Oakes, Broseley, Shropshire.

2. (*Subscribers only.*)—*Best* 1-*lb. Section.*—1st, C. Cox ; 2nd, J. Adams ; 3rd, John Spencer, Northampton.—(*Communicated.*)

LINCOLNSHIRE BEE-KEEPERS' ASSOCIATION.

The annual general meeting of the L.B.K.A. was held on the Show Ground, Grimsby, on Friday, July 20, being the last day of the Lincolnshire Agricultural Society's annual show. There were present at the meeting Gerard J. Young, Esq., J.P. (chairman), Walter Martin, Esq., Mr. H. O. Smith, Mr. F. H. K. Fisher, the hon. secretary, Mr. R. Godson, and many others. After the minutes of the previous annual general meeting had been read and confirmed, votes of thanks were accorded to the treasurer, auditor, committee, expert, district hon. secretaries, and hon. secretary, all of whom were re-elected.

The Right Hon. the Earl of Winchilsea and Nottingham was then unanimously elected the president of the association in succession to the late Bishop of Nottingham, who had held that important position since the formation of the association in 1875.

It was unanimously resolved to ask the British Bee-Keepers' Association to reduce the present fee of five shillings to one of two shillings and sixpence for the third-class expert's certificate.

The matter of the expert's autumn tours was discussed, and it was left in the hands of the hon. secretary to arrange the same.

Mr. Martin mentioned that there were some cheap diagrams of bee life, &c., now published for educational purposes, and the hon. secretary was instructed to ascertain the price of the same and report it to the committee.

A hearty vote of thanks to the chairman for presiding closed the meeting.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[2046.] Results of honey season will now be the principal topic with bee-keepers. What sort of a season have you had with your bees? What's your average this year? How did your bees do on the limes? and similar questions assail one when in the company of bee-keepers, and to all and sundry one is obliged to acknowledge that the season has been a poor one, though better than 1888. The averages are small this year. I often say to friends who inquire what my average is, I have none, or, at least, I never tot up the average of my stocks. How can one who sells swarms,—*i.e*, the honey-gathering population of the hive—expect to have good averages? Therefore, I do not average per stock, but leave the result of the year's working to the balance-sheet of debtor and creditor. I again tried the swarm-catchers I mentioned last year. I mean the bavins of underwood stood out singly leaning on a forked stick, and towards the hives, some 6 or 7 yards away from the front of the row of hives; then in and around the forked stick I wound a strip of black material, and a good part of my swarms selected the shady side of the bavins as swarming-places. These form very convenient places from which to hive them. I also tried them at my out-apiary, and they proved just as useful there as at home and as attractive to the bees. A method similar and perhaps better adapted to swarm-catching is given by Mr. B. Taylor in an American paper. It is as follows:—"Cut a quantity of bushes, 2 ft. long, and one bush a little longer, tie them into a bundle with the longest bush, which should have a hook at the end to hang the bundle up by. These bundles can be hung in convenient places during the swarming season, and have proven helps in catching, and more so in hiving, the swarms, as they can be detached from the tree or fence so readily with the bees clustered on them; or, if two or more swarms are inclined to unite, if one is settling before the second gets fairly on the wing, the first one can be taken to a secluded spot and another catcher put in its place to receive the flying swarm.

Referring to the carbolic cloth, and how to use it, I have received inquiries recently asking how to carbolise a cloth for bee work One says his cloth has no effect, another (by overdoing it and bungling the job) drove all the bees out of the hive by using the cloth. Our late lamented friend and counsellor, the Rev. Geo. Raynor—in his multitudinous "Useful Hints"—gave 1 oz. of Calvert's No. 5 carbolic, and 1 oz. of glycerine, well mixed together first; then 10 oz. of water to be added, the glycerine being used to make the carbolic acid mix with water; this solution to be kept in a bottle, corked, and labelled "Poison." The cloths—say half-yard of calico, unbleached—saturated in the solution, and then wrung as dry as possible, and the residue returned to the bottle for future use. I have used "Izal" and carbolic acid—either the crude sort or Calvert's No. 5—in equal proportions this summer, this I keep in a bottle without water (although the combined acid and "Izal" mixed freely with water). My cloths are just dipped in water and then

wrung out as dry as I can twist them, then two of the cloths are spread out one on the other and a few drops of the mixture sprinkled from the bottle over the cloths, and then both cloths rolled up together tightly, till I am ready to open the hive or take off the supers. These cloths are always ready, do not go out like the smoker, just when the bees get lively — they act as a deterrent to robber bees following the bee-keeper from hive to hive, as is the case in a large apiary. After the honey-flow is over they are a great saving of bee life when used properly. One of their best points is that they cover the whole of the frames at once, or the top of the whole super, be it a rack of sections or a box of shallow frames; then with new "clearer" they are simply indispensable. When putting the clearer on the hive, whether it is on top of another crate of sections or on the top of the brood-combs, the cloth by one action secures every bee and confines them where the bee-keeper wishes them to be. No smoking the entrance; in fact, no molestation of the colony to rouse their ire. The hive is very gently opened, the clearer (of which unique article I gave a description a week or two back) placed ready on a box or stool or a light crate made of laths, which is a very handy platform to work with. Now take off your wraps, except the carpet or quilt next to the sections, shake out your carbolised cloth, and, as you lift off the super, allow the cloth to fall on super below or brood-frames, whichever it happens to be, while you continue to place the super on the clearer; then take off the cloth and replace the super and clearer on the hive, the whole operation not taking two minutes. I never bang about amongst my bees like a buzz-fly in a room, but endeavour to work as quietly and adroitly as possible. Then when your super is cleared of bees and you remove it, the super clearer can be taken off and the carbolised cloth dropped on, and the adhering bees shook off on to the ground in front of the hive with a bump, and the quilt replaced in a short time—even before the sentinels at the entrances can realise that anything unusual has taken place in the hive.—W. Woodley, *Beedon, Newbury.*

HOW I COMMENCED BEE-KEEPING.

SOME USEFUL HINTS FOR BEGINNERS.

[2047.] I don't know whether the following account of the beginning of my bee-keeping life will be considered by the editors as having sufficient interest to justify insertion in their admirable paper, but I propose to jot down a few notes of my initiation and progress in the art. I have never seen any account of an absolute novice beginning with driven stocks, and being successful in establishing an apiary in that manner. I had been a bee-keeper three years before I bought a bee. I then purchased a skep. Once, and only once, I set up a swarm on its own account, otherwise from the time I started I have increased my apiary solely by driven bees.

I know that my way is open to many objections, and that there are many chances of failure; but an intelligent and careful method will, I think, lead to success. A friend of mine who commenced the year after I did, and set himself up in bees in the same manner, has had nothing but bad luck; for which I cannot account, except on the supposition of want of care. His outward circumstances with regard to situation, &c., are equal, if not superior, to mine, and still he keeps losing his bees. Time after time I have driven bees for him, but at the present moment he has but one stock in a skep. He has a way of thinking that anything in the nature of a makeshift will answer, and his "Oh, it'll do," may have some connection with his ill-success.

My first connection with bee-keeping in any shape or form occurred thus-wise:—I am a country pedagogue, and it is one of the privileges of my position to be called upon to fulfil all sorts of little duties for my neighbours. One of these had a swarm of bees issue on one of those days when no one was at hand who knew anything about "hiving," and the good lady dared not approach them herself; so, of course, the schoolmaster must be sent for. In response to an urgent message, I hurried up to find that I had to hive a swarm of bees, a thing I had never seen done or even heard described. I naturally raised some objections, but these were all overruled, and giving way to good nature and the lady's representations, I let her dress me up in the approved fashion, while she told me how to go on. My dress consisted of an old muslin curtain wound round my head and tucked under my coat, and two pairs of old stockings on my hands and arms. Thus rendered bee-proof, I sallied out, feeling pretty much as I imagine David did in Saul's armour, but closely following my instructions, I succeeded in hiving the swarm—it was in a very favourable position—without mishap. This contact with the bees raised a strong desire to know more about them, and I begun to talk to bee-keepers about their bees. I was made acquainted with a gentleman who kept bees on the new system, and on his recommendation I obtained Mr. Cowan's "Guide Book." Although so clearly written, I was somewhat in a fog, but a visit to the "Royal" Show, where I witnessed the operation of "driving," cleared every difficulty away, and in the autumn I drove two stocks for a neighbour from skeps. I united them and wintered in a skep, and thus for the first time became the possessor of bees. This stock came out strong in spring, but did not swarm. It was driven and the combs containing brood transferred to a bar-frame hive which I had made during the summer. Another driven stock was united with them. Another frame hive of my own construction was, the same autumn,

stocked with driven bees. For this hive I had bought some frames of comb from the gentleman mentioned above. These stocks did well the following season, and I was now fairly started on my bee-keeping career. I make my own hives (most of them on Mr. Cowan's plan), and use bought frames, which I wire, using full sheets of foundation. I mostly manage to have a box of standard frames as a super, on one hive, and this comes in handy for driven stocks. For the other hives I have section crates or shallow frames.

I have now seven strong stocks all supered, and six of them were established from driven bees. I have had very few swarming troubles; and, with the exception of one swarm, all have been put back. I also bought one stock in a skep with the intention of transferring, but the combs were so uneven and crooked, that the bees were driven and united to another driven stock. I have lost very few colonies, and those I have lost have always been in one particular hive, in which I used an impervious American cloth quilt. Three or four times stocks have perished in that hive. It may be merely a coincidence, but I cannot help connecting the quilt with the loss.

(*Conclusion in our next.*)

HELPING BEGINNERS.

[2048.] I notice in last week's *B.J.* (p. 309) an answer to "Tyro" (Rusholme), "Comb is affected with foul brood." As my place is only half a mile from above, I am anxious to know and meet the above amateur. I accepted early in the year the hon. secretaryship of the L. and C.B.K.A. for this district. I am a keen bee-man, and am anxious to be in touch with all such in my district, and am ready to give advice and practical assistance to all, whether members of the Association or not. I am located but three miles from Manchester Exchange, yet in this bad season I have taken nearly 180 lb. of honey—extracted and in comb, and shall have more yet. This from a spring start with four hives. I have lost four swarms (through my absence), secured one—made two nuclei before putting back swarms—and had a virgin swarm destroyed through the ignorance of the taker of it. This I call "not bad." The secret is "young queens" and "strong stocks." Moreover, my honey secured three second prizes at the show at Bolton (my first appearance as an exhibitor). If you have further communications from bee-keepers in this neighbourhood, I would be glad if you will put them in communication with me. I am trying to work up a good local society, and arrange meetings for interchange of views and practical bee-work. One of my friends, about twelve miles away, has made a beautiful three-comb observatory hive, and on Sunday last we had the keen enjoyment of witnessing her majesty lay eight eggs. We also saw the plates of wax on the abdominal wings of the wax-makers and comb-builders. We hope to gain much knowledge from the above hive, such as you read about but don't often get a chance of verifying with one's own eyes. Again expressing my desire to help or receive help from my brethren in this district, believe me, dear sir, yours very sincerely, FREDERICK H. TAYLOR, *Birch Fold Cottage, Old Hall-lane, Fallowfield, Manchester.*

[We will draw the attention of "Tyro" to the above.—EDS.]

PRICES OF HONEY.

[2049.] As some are clamouring at the enormous harvest reaped by the "middleman," and in reply to the request made in "Useful Hints" (p. 311), perhaps you will permit me, as one who buys and sells largely, to show the great profits I am making on buying and selling honey. The best wholesale prices I can possibly get for honey in glass jars is 9s. *per dozen*, each holding full 16 oz. of honey, in most cases only 8s. 6d. per dozen. Now, let us see what this honey has cost. I have just received 1 cwt. of good honey from a distance of 225 miles, and will give you the price of this particular lot as a fair sample :—

112lb. honey at 6d. per lb. ...	£2	16	0
Freightage per goods train... ...	0	4	8
Glass jars for above...	0	16	0
Boys' time straining, bottling, and labelling, including labels, say ...	0	3	0
Cost of getting same on the London market, say, 3d. per doz. ...	0	2	3
	£4	1	11

I have not reckoned anything for the time and trouble required in finding a market for such large quantities, so that you will see that this honey has cost me 8¾d. per lb., without taking waste into calculation, so that by supposing that I get the best price, I make *one farthing* per lb. profit! But this leaves out of consideration the primary outlay required to enable one to deal with honey on a large scale. I myself have had to fit up a large, specially-made double-cased boiler for melting granulated honey, tins cased in wood for hire to my customers to send the honey in, besides numerous other incidental expenses. You will say at once the business isn't worth doing. *No, it is not!* but as my customers take appliances in exchange for the honey, I make my profit on that transaction and am content to forego it on the other. Some who have received my circular have concluded that a market where tip-top prices could be obtained was opened to them and have expressed disappointment at this not being the case, but surely it must be a convenience to bee-keepers who experience difficulty in disposing of all their produce to receive appliances in exchange for their surplus. Anyway, I can assure them there is not much fortune-making in it for the sometimes much-abused "middleman."—A. W. HARRISON, *Potters Bar, August* 11.

SELF INTRODUCTION.

[2050.] This summer I formed two nuclei in the roughest fashion by simply putting in the frames at either end of a box about 2 ft. long, 1 ft. deep, and 14½ in. wide, hanging bits of carpet over each nucleus, reaching to the bottom, and covering the whole with some rough stuff. One queen became fertilised; the other, I think, was lost in her flight. This nucleus made the usual abortive efforts with queen-cells. On July 21 I gave it a frame containing eggs, and on the 28th, upon examination, found in it a laying queen, and in the other no queen, but newly-formed queen-cells, one of which was left them, and which progressed as usual. The openings were only square ½-in. holes at the extreme distance, and there was no alighting-board. I can only conclude that the queen, with or without invitation, quietly made her way under the carpet ends from one nucleus to the other, and was well received, and her own family at once wisely resolved upon raising a more faithful mother.—S. J., *Bristol, August* 10.

P.S.—It is dangerous, after Mr. Brice's interesting letter on nuclei (2041, p. 313), to show how easy it sometimes is to form them, and how capital a plan is Mr. Micawber's of "waiting for something to turn up?"

"STRAIGHTENING MIS-SHAPEN COMBS."

[2051.] Referring to query with the above heading, on page 319 of B.J. for August 9, if your correspondent will send me his address I shall in all probability be able to help him with his "bee-job."—ROBERT HEFFORD, Hon. Sec., Northants B.K.A., *Boughton, Northampton, August* 11.

TAKING BEES TO THE HEATHER.

A MISHAP.

[2052.] One day this week I took my hives to the heather, seven miles away. Being unavoidably detained in setting out, the daylight had faded as we neared our destination. While climbing the hillside the lorry unfortunately gave a lurch, and my best hive, containing fifteen frames of brood, was pitched on to the road side, and the crate of sections, blankets, bar-frames, &c., got sadly mixed up. Having drawn the horse out of reach of the infuriated bees, and sent off a messenger to a farmhouse—about one-eighth of a mile off—for a lantern, I put back the frames into the hive as well as I could, leaving it on the spot for the crawling bees to find their way, if possible, into their home.

We then proceeded to the site selected, and deposited the other hives in their respective places, getting home about midnight. The following day I visited the fallen stock, and found the ground black with dead bees, rain having descended during the night. The "lugs" were broken off some of the bar-frames, but the hive itself was uninjured. The bees, however, were furious, and it was impossible to tell whether the queen was alive or not. I had the hive placed alongside the other stocks. What ought I to do with this hive? I fear the brood has been chilled, as the night fell cold, and the frames lay some time on the ground. Could I tell from outside observation whether the brood was certainly chilled? I calculate that I lost one-half of the bees, and consequently did not put on the sections.—R. J. P., *Elgin, August* 11.

[It is impossible to tell what damage has happened to the brood without examination of the combs, and we should take first chance of overhauling the stock and seeing what the mischief really amounts to. You will soon see if the queen is gone, as in that event queen-cells will be started.—EDS.]

QUEEN REARING.

[2053.] Will you allow me, through the columns of JOURNAL, to thank Mr. Brice for his kindly help (*re* nuclei forming) in answer to my appeal, and his encouraging remarks towards close of letter (2041, p. 313) will be an additional spur towards success. I had formed two nuclei on July 4 by removing stocks to another site and inserting ripe queen-cells, and was successful in both cases. I also moved two skeps which stood side by side, and allowed the flying bees to enter a skep placed between the two sites, and gave them two frames of brood and one stored comb with feed bottle to raise a queen, which I should not do again, after reading Mr. Brice's letter; they raised seven cells, but, as Mr. Brice points out, they would not be properly nursed, and so be inferior in quality.

I fear I have made a mistake in describing the larvæ as three days old; it should have been from the laying of the egg, the foundation only being inserted in a strong stock four days and a-half before using, and the larvæ only just formed at bottom of cell, and when I looked on the fifth day from insertion into queenless stock, they had not quite finished sealing up one of the cells. Again thanking him for his plain, straight, wholesome advice, and hope we shall have many such communications from his pen.—CHARLES HARVEY, *Stoke Prior, August* 11.

"SAVE THE BEES."

We have been much gratified by the numerous offers (including one from a lady) made by our readers to drive the bees referred to on p. 303 of the BEE JOURNAL for August 2, and take this opportunity of thanking those who volunteered for the work. We are not less pleased that our effort has, we suppose, saved the bees, than at the fact of there being plenty of competent hands ready to put out the fire of the hateful sulphur pit.

METEOROLOGICAL SUMMARY.

JUNE, 1894.

Locality, Stoke Prior, Worcestershire.
Height above sea-level, 225 ft.
Rainfall, 1·60 in.; heaviest fall, ·40 in. on 4th.
Rain fell on eleven days.
Max. shade temp., 75° on 29th.
Min. temp., 35° on 18th.
Max. shade temp. at 9 a.m., 65° on 25th.
Min. temp. at 9 a.m., 49° on 5th.
Frosty nights, nil.
Max. barometer, 30·15° on 29th.
Min. barometer, 29·4° on 2nd.

The first three weeks of the month very dull, cold, and wet. No surplus gathered. On the 20th not an ounce of honey in some of my hives; in fact, at starvation point. From 21st until 29th honey stored very rapidly, but supers not soon taken to owing to the empty state of the brood-nests. Several swarms reported, but virgin queens several days old before getting mated. A steady barometer at close of month.

JULY.

Rainfall, 2·57 in.; heaviest fall, 1·04 in. on 29th.
Rain fell on twelve days.
Max. shade temp., 81° on 1st.
Min. temp., 40° on 3rd.
Max. shade temp. at 9 a.m., 68° on 5th.
Min. temp. at 9 a.m., 54° on 17th and 22nd.
Frosty nights, nil.
Max. barometer, 30·1° on 1st.
Min. barometer, 29·2° on 12th.

Weather on the whole favourable for the secretion of nectar, but the mower has ruthlessly laid bare the "happy hunting grounds." Not much honey stored after the first week. What little is now being stored is of a poor quality, chiefly from the blackberry and beans. The honey season in this district has been a poor one. Some large "takes" reported, but to the detriment of other stocks, so the average is comparatively small.—PERCY LEIGH.

Queries and Replies.

[1130.] *Bees Carrying Pollen when Fertile Worker is Laying.*—1. When the queen of a hive is lost and a fertile worker is laying, do the bees bring in pollen and work in the same manner as when the queen is laying? 2. When attending to a hive which had been dropped and the super shaken out of position, a noise was heard within like a hen calling her chicks (at a lower pitch), or like the croak of a frog. (*a*) Was this the queen? or (*b*) what does it indicate? 3. Upon putting a super below others partially filled, the bees tore down the pieces of starter foundation, and for some time did no work in it. Please explain. 4. Do bees when killing drones destroy drone brood and throw it out of the hive?—A. *Yorkshire, August* 10.

REPLY.—1. The bees bring in pollen, but certainly do not "work in the same manner" as when they have a queen and normal brood-rearing is going on. 2. (*a*) No. (*b*) We should imagine it to be nothing more than a bee which had got stuck partly fast in some way and made a noise, as a fly does when caught in a spider's web. 3. With only the few words above to guide us, we can only suppose that the "starters" were insecurely fixed, or that the foundation used was, for some reason, disliked by the bees. 4. At the general drone-killing time—*i.e.*, the end of honey season—there is usually no drone-brood in the hive, but when drones are cast out in times of impending famine the brood is also thrown out.

[1131.] *Uniting Driven Bees.*—Although we have kept bees for a number of years on the old skep plan, I am quite a novice at the more practical modern system, and, being anxious to learn something of the latter, I am compelled to seek your advice as under:—I have bought two new frame-hives of approved make, but so far have no bees in them. So I thought of taking off a super now being worked on a skep, drive the bees from it, letting them return to the skep. Then cut out the combs and tie them into the frames of my new hives. I have the promise of several lots of bees from a neighbour for the driving, and also have the "Guide Book" to inform me how to proceed; my question, therefore, is:—1. Will the bees take to the combs from the super and unite without fighting if I join two lots of the driven bees together? also, must I sprinkle them with syrup when uniting? In answer to "Inquirer" (1,113, p. 297) it is stated that, when removing bees from a roof, the fumes of chloroform should be used. There are bees in the roof of a summer-house here which I want to remove, and will have to take away part of the ceiling to do it. 2. Is the chloroform put on paper and used in an ordinary smoker, or how? I have tried my hand at transferring one stock from a skep, but the bees do not seem to work well (though I gave them some honey-combs along with the others), and there seems to be no brood, so I fancy they are queenless. 3. Should I add a driven lot of bees to them? Bees are destroyed about here in large numbers every autumn by means of sulphur; I am, therefore, going to try and introduce the frame-hive, so as to stop this practice if I can.—H. PUGH, *Bury St. Edmunds.*

REPLY.—1. Bees will take to the combs quite readily, but you should see that each frame is properly filled out with worker comb, not partly filled, or they will be completed next spring chiefly with drone comb. If you can unite the two driven lots by throwing

them together in one skep, after driving and shaking them well up, as you would so many peas in a basket, so as to thoroughly mix the bees, they will run into the frame hive without fighting. Otherwise use *very thin* scented syrup as directed in "Guide Book." 2. Chloroform was only advised to meet the special circumstances of a special case, not for general use in removing bees from roofs. It is not used in a smoker but on a cloth damped with the drug, and so placed that the fumes reach the bees. 3. Yes, if they are queenless.

Bee Shows to Come.

August 22 and 23. — Shropshire B.K.A. Annual show in connection with the Horticultural Society's great fête in "The Quarry," Shrewsbury. £35 in prizes for bees, honey, hives, and appliances. For prize-lists, &c., apply T. Whittingham, Upton Magna, near Shrewsbury.

August 22 and 23.—At Derby. Derbyshire B.K.A. Thirteen classes for hives, bees, honey, and appliances. W. T. Atkins, secretary, 12, North-street, Derby.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

August 23.—At Madresfield, in connection with the Madresfield Agricultural Society; fourteen classes for bees, hives, and honey. Entries close August 18. Rev. E. Davenport, hon. sec., Burlish Lodge, Stourport.

August 29 and 30.—Annual show of the Staffs. B.K.A. At Stone. In connection with the Staffs Agricultural Society's meeting. Nineteen classes for bees, hives, honey, &c. Harold Twentyman, sec., Wolverhampton.

August 31.—At Knighton, Radnorshire. In connection with annual Flower Show Industrial Exhibition, Military Tournament, and Horse, Dog, and Poultry Show. Prizes for Sections, Extracted Honey, and Collections of Honey. Schedules from F. L. Green and Joseph Blower, hon. secs., Knighton.

September 4 and 5.—At Coventry. In connection with the Warwickshire Agricultural Show. Annual show of the Warwickshire B.K.A. Liberal prizes for honey, bees, and appliances. For schedules apply J. N. Bower, hon. sec., Knowle.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1-lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

September 12 and 13. — Scottish Bee-Keepers' Association, in connection with the show of the Caledonian Horticultural Society, Waverley Market, Edinburgh. Schedules now ready. John Wishart, assistant secretary, Castlecraig, Dolphinton, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries close September 11. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

F. R. S. (Cornwall).—The fact of your only giving postal address when ordering does away with any chance of obtaining redress, supposing that the goods will eventually reach you. Otherwise the matter might be carried further. The firm can hardly be blamed for not examining books to verify address sent by yourself.

Oxfordshire.—The best course to follow, under the circumstances, is to take no notice of your neighbour's threats, which are not at all likely to be carried out. It is not easy to define the law on the points you ask advice upon, and the less you have to do with litigation the better. Refer also to "Useful Hints" on first page.

W. J. Raby (Southam).—We advise you to be content—as a beginner—with the fourteen sections taken from your hive, and leave the honey in brood-chamber for the bees' use. If, however, you are resolved on taking some combs from the latter, on no account remove more than the two outside frames, and these only if they contain no brood. Letters should be addressed direct to office, not to our publishers.

Derby Excluder.—1. Honey will take no harm in a "treacle tin" if kept in a warm, dry place. 2. Honey cannot be prevented from granulating. To reliquefy, place the vessel containing it in hot water till the honey dissolves.

Thomas Harris (Coombe). — *Wintering Driven Bees in Frame Hive.*—The five frames of comb proposed to be given will be enough to winter the bees on. To give either full or half-sheets of foundation in addition to the built-out combs at this season is not advisable.

X. G.—The company referred to was wound-up a few years ago, and some sort of trifling dividend declared, but we have not the particulars at hand.

T. J. Ankins (Swanscombe).—*Dealers in Beeswax.*—There are firms in both London and Liverpool who deal in beeswax wholesale, but the bulk of the wax imported is, we believe, sold by the produce-brokers to whom it is consigned by the exporters abroad. We are not in a position to give names, &c., of firms so dealing with it, but

have no doubt that several of our advertisers who are foundation makers on a large scale could and would sell wax by the ton if the occasion arose.

J. C. BARNLETT (Penzance).—No description of a "Wells hive on the W.B.C. plan" has appeared in our pages. The only maker we know of who manufactures a hive and names it as being specially constructed on that plan is Mr. Meadows, of Syston. As to dummies and lowering floors, you might write Mr. Wells on these points.

S. CRAWFORD (Castlederg).—Brood is chilled (not foul), and is probably a result of there not being sufficient bees in the nucleus hive to keep the brood warm.

D. H. H. CHURCH (Warlingham).—Heather sent is the right kind for honey (*erica vulgaris*). The second bloom was too much crushed for identification, but we do not think it is of much value as a honey-plant.

CHAS. E. COCKIN (Hull). — *Moving Bees Fifty Miles.*—Presupposing that the hives to be moved do not contain swarms of this year, we should defer removal till the end of September. Great care will also be required in packing to make the bees safe for the journey, as a very small amount of bad management or want of experience might cause disaster to the stocks.

F. A. HUTCHINS.—Comb is foul-broody. If bees are numerous, we should at once remove them from the combs. and burn the latter, reducing the bees to the condition of a swarm. You might also refer to B.J. of June 21, p. 241, for treatment.

R. BAYLEY (Plymouth).—*Races of Bees.*—The five specimens of bees sent may be classed as the ordinary brown bee of the country, Nos. 2 and 3 having perhaps a shade of the Carniolan element, but nothing worth thinking about.

Special Prepaid Advertisements.

Situations. Publications. Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

BICYCLE Offered in EXCHANGE for Bees and Appliances. B. PLUMB, Risley, Derby. E 81

FOR SALE, Two Healthy STOCKS of BEES. E. BROCK, The Abbey, Robertsbridge. E 83

WANTED, SECTIONS of HONEYCOMB (first quality). Prompt cash; packages sent. Any quantity. E. HURST, Bexhill, Sussex. 235

GOOD Healthy Straw Skeps of BEES, with Queen, 11s. each. Properly packed free on rail. R. BROWN, Flora Apiary, Somersham, Hunts. E 74

HEALTHY DRIVEN BEES, 1s. 3d. per lb., with young Queen. Packages free on rail. R. BROWN, Flora Apiary, Somersham, Hunts. E 73

FOR SALE, HEALTHY DRIVEN BEES, with queen, 1s. 3d per lb.; package, 1s. JOHN DAVIES, Bee-Keeper, Newport, Salop. E 78

WANTED at once, SECTIONS of DRAWN-OUT COMB. W. SMITH, 118, Villa-street, Lozells, Birmingham. E 80

GOOD Guaranteed '94 ENGLISH QUEENS, 2s. each. WOOLDRIDGE, Parliament-street, Chippenham, Wilts. E 79

Prepaid Advertisements (*Continued*)

HEALTHY DRIVEN BEES, and their Queen, 1s. 3d. per lb. Young Queens at 2s. 6d. each. Address, E. GARNER, Broom, near Biggleswade, Beds. E 86

FOR SALE.—Finest ENGLISH HONEY. ¼ cwts. 8d. per lb. Tins free. Sample 2d. Deposit. R. DUTTON, Terling, Witham, Essex. E 82

FOR SALE, about 500 lb. of Pure Extracted CLOVER HONEY. Offers wanted. Also several Dozens of well-filled Sections. Address, GEORGE CROMBIE, Hotham, R.S.O., East Yorkshire. E 77

THE CO-OPERATIVE SOCIETY'S SHOW.—Glazed SECTION-CASES (both sides) for Exhibition or Sale. 18s. per gross, or 1s. 9d. per doz. J. GREENHILL, 80, Graham-road, Wimbledon.

ENAMELLED METAL SECTION CASES for Exhibition; glassed both sides. Have been used, but in good condition. 1s. 6d. per dozen packed. H. WOOD, Paradise, Lichfield. E 85

FOR SALE, Fifteen Colonies of BEES in Bar-Frame Hives complete, or only on frames. Cheap. Free from disease. Also Driven Bees, 1s. 6d. per lb.; packages free. THIS SEASON'S QUEENS, 2s. 6d. E. HANCOX, Sandford-St.-Martin, Oxfordshire. E 76

CHOICE, FERTILE, 1894 QUEENS. Post free 3s. 3-lb. Swarms, with choice young Queen, on rail, 10s. Beautiful White Clover HONEY, in 28-lb. tins; on rail, 8½d. per lb. Samples sent. Finest White Clover SECTIONS, 12s. per doz. on rail. Packing free. JOHN OULTRAM, The Apiary, Kingsley, Frodsham, Cheshire. E 75

HEALTHY DRIVEN BEES. 1s. 3d. per lb.; in 5-lb. lots. Boxes to be returned. E. LONG, Cottingham, Cambs. E 70

HEALTHY DRIVEN BEES, 1s. 6d. per lb. for 4 lb. lots or over, Queen included; packing free. F. GAY, Edmondsham, Cranborne, Salisbury. E 71

FOR SALE, Strong Healthy STOCKS of BEES for the Heather, in Combination Hives, one Observatory Hive. H. LANDER, Alandale, Wadebridge, Cornwall. E 65

FOR SALE, Young Fertile Native QUEENS, 3s. 6d. each. Also strong Stocks of Healthy Natives, with young Queens on Standard Frames, with or without hives. H. WITT, South Ascot, Berks. E 84

GUARANTEED Healthy 1894 FERTILE QUEENS, 3s. 6d. each; safe arrival. DRIVEN BEES, 1s. 6d. per lb. for 5-lb. lots or over, Queen and Packing included. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. E 64

BEES for THE HEATHER—Guaranteed healthy Nuclei, 3-Frame 8s.; 4-Frame, 10s.; 5-Frame, 12s. Also NEW HIVES for THE HEATHER at 8s. 6d. Apply, J. TREBBLE, Romansleigh, South Molton. E 55

LACE PAPER for GLAZING SECTIONS. Four neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

HONEY.—Finest White Clover and Heather HONEY WANTED. Post samples and lowest prices, stating quantities. SPRING, Brigg, Lincs.

MARKET for SECTIONS, EXTRACTED HONEY, and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

CHOICE YOUNG QUEENS, excellent strain, produced by seven years' careful breeding, guaranteed fertile, post free 5s., virgins, 2s. 6d. Rev. C. BRERETON, Pulborough, Sussex. 229

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

Editorial, Notices, &c.

BEGINNERS' QUERIES.

THE NEED FOR A TEXT BOOK.

We have before now had occasion to remark upon the frequency with which correspondents of a not too reflective turn write us for information on bee matters, and in so doing put a series of questions so numerous and withal requiring replies necessarily so voluminous that it is impossible for us to deal satisfactorily with them in the limited space at our command. We should not entirely complain of this were it not that correspondents do neither themselves nor us justice in supposing that anyone can launch into a pursuit requiring so much of pre-acquired knowledge as that of keeping bees successfully, with no other personal help or guidance than is afforded by the query and reply columns of their BEE JOURNAL.

A letter recently received serves to illustrate the point we have in view, because of its being typical of many having much the same import, and we insert it below not for the purpose of replying seriatim to the queries put, but rather with the object of showing to our correspondent—along with others who may be similarly situated—how unlikely it is that they will succeed as bee-keepers if they begin by getting on to the wrong track at the very outset. The letter is as follows :—

> Having started bee-keeping this season with a June swarm in skep, I want to know the best way to put them in a frame hive, so as to obtain a little honey without destroying much brood, if it can be done? The swarm weighing about 5 lb., I put a smaller skep on top (two weeks after hiving), but no queen excluder between. 1. Which is the best and easiest method for getting bees into frame hive? 2. How long can I let them remain before transferring? 3. Would frames with full sheets of foundation with a brood comb from skep in middle of hive do? 4. How can I arrange skep to obtain all young bees from brood into hive? 5. If I feed bees, what quantity will an ordinary stock require? 6. Can I feed them now, so they will not require feeding during the winter? 7. What food do you recommend? Bees are at Brentwood, not here in London.—J. W. M., *Poplar, E., August* 14.

The very nature of the questions asked in the above show that our correspondent is quite a novice at bee-keeping, and also point to the conclusion that he has not hitherto read any comprehensive work on bee management. His own impression apparently is that transferring a stock of bees from a skep to a frame hive in the autumn is a very easy job, imagining also that if sheets of foundation are given, and the bees are fed, all will be right. He also asks for instructions how to perform bee-operations—requiring both skill and experience to be successful—as if it needed but a word or two of explanation from us to enable anyone to rightly manage such jobs. But the chances are sadly against any such satisfactory result, and it is more than probable that bees transferred under such conditions would come out very badly in spring, even if they survived the winter at all.

We have repeatedly declared our opinion that one of the first things a beginner in bee-keeping should furnish himself with is a reliable book on bee-management. Moreover he should read it carefully, as a preliminary to taking upon himself the management of even a small apiary. As much more may be afterwards done by way of acquiring practical experience with live bees as is agreeable to the taste or convenience of the would-be bee-keeper; but less than a text book, and a careful perusal thereof, will not be likely to lead to success. The price of such a book as we suggest need not exceed eighteenpence — a simple handbook may be had for sixpence—so that cost is no obstacle; but, as we have said, a guide-book of some kind is indispensable to the beginner aspiring to manage bees according to modern methods.

At the same time we trust that learners will not underrate the value attaching to our reply column when the question of lengthened experience comes in. It is one thing even to know how to get through bee-operations without a breakdown or a failure, but quite another to judge safely what the ultimate result of such operations are likely to be. As a means, therefore, of emphasing this point, and at the same time fulfilling our obligation to help "J. W. M." in his difficulty, we advise him to let the bees remain in the skep they now occupy. Lift off the "smaller skep"—or super—and if it contains no brood, it may be

appropriated as surplus. If, after removal of the super, the skep does not weigh something like 25 or 28 gross pounds, it must be fed up to that weight during the last week of September. It is far safer to winter the bees in the skep than incur the various risks attendant on transferring bees and combs to a frame-hive at end of the season.

Having said this much, we conclude by repeating our remark on the value of a reliable text-book to beginners, and the communication printed above forms a case in point, for it is quite certain that in any such work as we have referred to our correspondent would have the substance of a fuller and more complete reply to his seven queries than there is space for in our reply columns. In fact, the latter are, perforce, intended not for grounding beginners in the elementary stages of bee-craft, but as a help when difficulties arise owing to circumstances outside the scope of an instruction book.

TO BEE-KEEPERS.

The following circular—which explains itself—has been forwarded to us with a request that we should bring it before readers of the BEE JOURNAL. We have pleasure in doing so, as we also have in saying that it lies within the reach of many of our charitably-disposed readers to render assistance to a cause, the goodness of which none will question, at a very small sacrifice to themselves, by sending a present of honey, or a promise to that effect, addressed, "The Managers, Bee Exhibit, Y.M.C.A., Derby.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

August, 1894.

We have very much pleasure in calling your attention to the fact that we propose devoting one night, Wednesday, September 5, to a novel, but instructive and intensely interesting entertainment, which is being given on behalf of the building fund of the Derby branch of the Y.M.C.A.

The following is a preliminary programme :

1. A lecture on "Bees and Bee-keeping" (illustrated by a series of beautiful lime-light pictures), by Mr. T. W. Jones, of Etwall, (first-class bee expert and lecturer to the Derbyshire Bee-keepers' Association).

2. An exhibition of bees in observatory hives.

3. A sale of honey, fruit, flowers, and refreshments in one of the rooms.

4. Music and singing at intervals.

We shall be very glad to receive presents (small or large) of honey—in jars or sections—for sale in any form. Those intending to send anything will kindly communicate with us at the earliest possible moment.

All presents will be duly acknowledged, and report of proceeds will be given in the October number of *Derby Young Men.*

F. WALKER and C. W. COTTON,
Hon. Secs.
ARTHUR K. YAPP, Hon. Treasurer.

SOUTH OF SCOTLAND B.K.A.

The annual show of the above association was held in Palmerston Park, Dumfries, on August 10 and 11, in conjunction with that of the South of Scotland Horticultural Society, and the exhibition of bee produce was admittedly an attractive feature on the field. There were no less than 300 entries, against 240 in 1893—a result not to be wondered at considering the number and value of the prizes offered, including silver cups, medals, and cash from 40s. downward, to the number of sixty prizes in all. Altogether the display was a grand one for what is considered to be a rather "shaky" bee-season. In the class for Designs in Honeycomb, the first was taken by Mr. Newbigging, and shows a crown with scales, and the word "Justice" below. Mr. Roebuck's 2nd prize design consisted of the letters "V. R." and the words "Great Britain;" while Mr. Newbigging also secured third with one in which the words are "Scotland for Ever." Regarding the general show, it may be said that the classes "confined" are of first-rate merit. In the "open classes" there is a magnificent display of sections, and though the English sainfoin honey leads the way, and all the wins go south, Scotch quality follows close. Extracted honey is here also excellent, with few exceptions. The prize lots ran each other very close. In the "open competition" for extracted honey the Englishmen were again to the front, but local men got into the minor list.

The Rev. R. McClelland undertook the duties of judging, with Messrs. Alex. Gardner and Wm. Jardine as assistants, the following being the awards :—

Display of Honey.—1st, T. K. Newbigging, Dumfries.

Design in Honeycomb.—1st and 3rd, T. K. Newbigging; 2nd, Sidney Roebuck, Dumfries.

Super Under 25 lb.—1st, Wm. Hogg, Castle Douglas; 2nd, Ross & Kerr, Dumfries; 3rd, T. K. Newbigging; v h c, S. Roebuck.

Super Under 15 lb.—1st, Wm. Hogg; 2nd, Peter Jeffrey, Kinmount; 3rd, Ross & Kerr; v h c, George Will.

Super Under 7 lb.—1st, Wm. Hogg; 2nd, S. Roebuck; 3rd, T. K. Newbigging.

Bell Glass Under 20 lb.—1st, David Leith, Borgue Village; 2nd, John Scott, Langholm; 3rd, G. Will; v h c, S. Roebuck; h c, T. K. Newbigging.

Super of Honey in Super Supplied by Association.—1st, Wm. Hogg; 2nd, P. Jeffrey; 3rd, James Learmonth, Balmaghie; v h c and h c, T. K. Newbigging.

Eighteen 1-*lb. Sections.*—1st and 2nd, Ross & Kerr ; 3rd, J. Learmonth ; v h c, W. Gilchrist, Castle Douglas ; c, T. K. Newbigging.

Six 1-*lb Sections.*—1st, Wm. Hogg ; 2nd, Ross & Kerr ; 3rd, G. Will ; v h c, W. Robson, Auldgirth ; c, Alex. Chalmers, Terregles.

Two 1-*lb. Sections.*—1st and 3rd, Ross & Kerr ; 2nd, Wm. Boyes, Auldgirth ; v h c, Wm. Hogg ; h c, A. Chalmers.

Six 2-*lb. Sections.*—1st, Ross & Kerr ; 2nd, Wm. Hogg ; 3rd, P. Jeffrey ; v h c, J. Learmonth ; h c, J. F. Hyslop, Auldgirth.

Three 2-*lb. Sections.*—1st, Wm. Hogg ; 2nd, Ross & Kerr ; 3rd, J. Learmonth ; v h c, Wm. Richardson, Cowhill ; h c, Walter Graham, Cummertrees.

Twelve 1-*lb Jars Extracted Honey* (*not heather*).—1st, Ross & Kerr ; 2nd, P. Jeffrey ; 3rd, Wm. Hogg ; v h c, T. K. Newbigging ; h c, S. Roebuck.

Six 1-*lb. Jars Extracted Honey* (*not heather*).—1st W. Graham ; 2nd, Ross & Kerr ; 3, T. K. Newbigging ; v h c, G. Will and W. Robson ; h c, J. F. Hyslop.

Two 1-*lb. Bottles Run Honey.*—1st and 2nd, Ross & Kerr ; 3rd, P. Jeffrey ; v h c, T. K. Newbigging and G. Will ; c, J. Learmonth and W. Graham.

Bees' Wax.—1st, Wm. Hogg ; 2nd, J. F. Hyslop ; 3rd, Miss S. J. Cooper, Leicester ; v h c, R. Martin, Moniaive ; h c, Ross & Kerr.

Two 1-*lb. Sections Honey* (*members owning not more than six hives*).—1st, Wm. Rogerson, Durisdeer ; 2nd, W. Graham ; 3rd, G. Will ; v h c, Wm. Richardson ; c, J. Tweedie, Mouswald.

Best Two 1 *lb. Jars Extracted Honey* (*members owning not more than six hives*).—1st, W. Graham ; 2nd, G. Will ; 3rd, Wm. Rogerson ; v h c, J. Boyes, Auldgirth.

SPECIAL CLASSES—OPEN.

Six 1-*lb. Jars Extracted Honey* (*not heather*).—1st, Jos. F. Williamson, Fleetwood, Lancashire ; 2nd, Owen Roberts, Rowton Grange, Chester ; 3rd, Edward Charley, Ince Vicarage, Chester ; v h c, Ross & Kerr and Samuel Cartwright, Shawbury, Salop ; c, J. Boyes, J. F. Hyslop, and J. T. Nickels, Day House, Shrewsbury.

Six 1-*lb. Sections.*—1st, John White, Toddington, Winchcombe ; 2nd, Wm. Woodley, Beedon, Newbury ; 3. D. Sheppard, Toddington, Winchcombe ; v h c, T. K. Newbigging ; c, James Boyes and Ross & Kerr.

LAUDERDALE BEE-KEEPERS' ASSOCIATION.

This Association's Annual Show of Honey was held on Saturday, August 11, in the Eagle Hough, within the Thurlestane Castle Policies, the seat of Lord Lauderdale. The schedule of prizes comprised two classes :—Class I. being open to all-comers, whilst Class II. was confined to bee-keepers starting the season with not more than three stock hives. The display of honey was large, and competition keen, there being no fewer than 111 entries ; excellent sections were staged, whilst, owing to the dry season, the extracted honey was excellent in colour, flavour, and consistency. Mr. Geo. D. Clark, Eagles Cairnie Maine, officiated as judge, and the prizes were awarded as follows :—

Class I.—Ten 1-*lb. Sections.*—1st, Countess of Lauderdale ; commended, John Buckham, Lauder, and W. Murray, Lauder.

Six 1-*lb. Sections.*—1st, W. Murray ; 2nd, D. Pringle, Chapel ; 3rd, J. Buckham.

Six 1-*lb. Jars Extracted Honey.*—1st, R. and G. Robson, Lauder ; 2nd, W. Murray ; 3rd, D. Pringle ; h.c., John Turnbull, Lauder.

Heaviest Two Sections, 1-*lb. Size.*—1st, Geo. Leon, Boghall ; 2nd, D. Pringle ; 3rd, Wm. Murray, Lauder.

Best Display of Honey.—1st, R. and G. Robson ; 2nd, the Countess of Lauderdale ; 3rd, Wm. Murray.

Best Non-sectional Super.—1st, Geo. Leon, Boghall ; 2nd, R. and G. Robson ; 3rd, Wm. Scott, Burn Mill.

Best Beeswax.—1st, R. Bruce, Lauder ; 2nd, Helen Robertson, Kirktonhill ; 3rd, R. and G. Robson.

Class II.—Five 1-*lb. Sections.*—1st, W. Murray ; commended, J. Buckham.

Three 1-*lb. Sections.*—1st, Wm. Hattrick, Lauder ; 2nd, Wm. Murray ; 3rd, J. Buckham.

Three-lb. Jars Liquid Honey.—1st, Wm. Murray ; 2nd, Adam D. Hutchison, Lauder ; 3rd, Geo. Rutherford, Lauder.

Best Super in Straw.—1st, Helen Robertson, Kirktonhill (medal) ; 2nd, the Countess of Lauderdale ; 3rd, David Sommerville, Lauder.—(*Communicated.*)

BEE AND HONEY SHOW

AT MABLETHORPE, LINCS.

The Annual Horticultural Show at this popular seaside resort took place on Thursday, August 16, and for the second year prizes for bees and honey were offered, this department being in connection with the Lincolnshire Bee-keepers' Association. The bee-tent of the association was present in charge of Mr. H. O. Smith, Louth, who gave lectures with manipulation of live bees at intervals during the afternoon, and large numbers of the visitors showed great interest in these lectures. The honey classes were all well filled, that for extracted honey having sixteen exhibits of excellent quality staged. The judges, Messrs. F. H. K. Fisher and W. R. Lilly, made the following awards :—

Observatory Hive with Bees and Queen.—1st, D. Seamer ; 2nd, R. Godson ; h.c., H. J. Banks.

Twelve 1-*lb. Sections.*—1st, R. Godson, 2nd N. Duckering ; 3rd, Rev. Dr. Honey.

Twelve 1-lb. Jars Extracted Honey.—1st, R' Godson ; 2nd, H. J. Banks ; 3rd, A. and H. S. Godsmark ; 4th, J. Emerson.

Six 1-lb. Jars Extracted Honey (cottagers only).—1st, J. Taylor ; 2nd, Mrs. Holmes ; 3rd, J. Searle.

Bell Glass, over 10-lb.—1st, N. Duckering ; 2nd, Miss Pickering ; 3rd, A. and H. S. Godsmark.

Beeswax.—1st, J. Markham ; 2nd, Mrs. Holmes ; 3rd, A. and H. S. Godsmark.—(*Communicated.*)

BEE-KEEPING IN CARMARTHENSHIRE.

On Thursday, the 9th inst., the Aberguilie Horticultural Society held their annual show in the Palace grounds, which were thrown open by permission of his lordship the Bishop of St. David's. A better exhibit could not well have been secured than was shown in every department of the show. There were both open and local classes for honey, Mr. Rice, Castle Piggin, taking first for six fine 1-lb. sections in the former, the second going to Mr. Taylor, Alltyfersill. For six 1-lb. jars extracted honey P. C. Thomas got first and Mr. Rice second. In the local class P. C. Thomas secured first for both sections and extracted honey. Mr. Spurrell, Carmarthen, judged the honey classes.

During the afternoon an instructive lecture on bees and the advantages of the modern system of bee-keeping was delivered by Mr. A. Hamer, of Llanarthney, who had quite a large audience of attentive listeners. In order to illustrate his subject, the lecturer exhibited bees, honey, and appliances, using each to enable the audience to better understand his points as he went on, Mr. Taylor assisting Mr. Hamer by extracting shallow frames of honey before the visitors. At the conclusion of the lecture the Bishop of St. David's, who was among those present, spoke in very favourable terms of the instructive address they had listened to, and several persons afterwards gave their names to Mr. Hamer as willing to become members of the Bee Association, while others pressed him to make an effort in *re* starting the Carmarthenshire B.K.A., and it is understood that steps will shortly be taken in that direction.—(*Communicated.*)

THE HONEY INDUSTRY.

The *Times* (August 14), under the heading of "The Honey Industry," remarked "that few rural industries offer greater opportunities for profitable extension than that of bee-keeping," and "that the production of honey in this country might be enormously increased."

Singularly enough, on the same day at Hawarden, Mr. Gladstone expatiated on the advantage of developing every branch of smaller cultivation, inasmuch as "whatever is produced from the earth in excess of what we have previously had confers a double benefit." Mr. Gladstone specially mentioned the "care of bees," and remarked that, "although the transaction in a small garden may appear unimportant, as it cannot be on a very large scale, nevertheless, when the aggregate of transactions came to be made up, it is a vast aggregate, and commerce derived important extension from the development."

It is encouraging to the British Bee-keeping Association and to its affiliated county societies to have their object thus publicly advocated. It is encouraging to know, too, that despite the unfavourable character of the present season, the bee-keeping industry is, without doubt, steadily extending.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*The Editors of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to "*The Manager, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C." (see 1st page of advertisements).*

TREATMENT OF FOUL-BROODY HIVES.

THE CANADIAN METHOD.

[2054.] I do not see that any of your readers have yet given their experience of the above, so I venture to send mine :—

I am experimenting on one of my stocks the history of which is shortly this :—It was a swarm of 1892, and hived in a skep. It gave two swarms last year (1893), was strong this spring, and in April this stock appeared to be my best this season. It then came to a standstill, and got no stronger ; in the hot days of June the bees clustered outside as if about to swarm. I watched and waited, but no swarm came, and in May a bad smell was quite perceptible to any one standing a few feet away. I wanted this hive to swarm, and so placed no sections on it. On July 6, at 1 p.m., I drove the bees, and hived them on six frames fitted with 1½ in. starters of foundation. I then took their former domicile, and placed it over burning sulphur, where it remained for several hours exposed to the fumes, with a view of destroying everything in it having life. All went well with the swarm for four days, so on the 10th, at half-past one p.m., I opened the hive, brushed off the bees from the combs, and let them run back into the hive. I then took the frames—with combs partly built from the starters—indoors, substituting frames with full sheets of foundation.

After covering up the hive and making all tidy, I was watching the entrance, when I saw a rush made from the hive, and in a few seconds the bees were all in the air, the queen going last, and I saw her distinctly circling in the air several times before she was lost to my view amongst the bees. After a short time the swarm was secured in a skip, and thrown out in front of the frame-hive as usual. About half of them had run in when a heavy shower came, and half-drowned the remaining portion. I managed, however, to shake them off the cloth into the empty part of the hive. Next day I found the half-drowned bees had joined their comrades by passing under the dummy, and all were engaged carrying out the sugar I gave them the previous evening.

I went out at six in the evening to have another look, and seeing all very quiet I raised the quilts, and to my great surprise found the bees gone again! They were clustered in exactly the same spot as on the previous day. The swarm was again secured, a bottle of hot syrup placed in the hive, and the bees seem to be going all right, and working hard at the time of writing. What can have caused the bees to desert the hive in this way?

I am sending by this post, in separate packet, a piece of comb cut out of the old hive from which I drove the bees; but I may say from bitter experience I have no doubt but it is a case of foul brood. Mr. McEvoy's treatment may be good, but, in my opinion, stocks so dealt with are lost to the beekeeper, so far as honey and swarms are concerned, for the season.

Later on I shall send you a report of bee doings in this district.—M. K., *Piltown, co. Kilkenny.*

[Comb sent is badly affected with foul-brood. We do not know what caused the bees to desert the hive unless the fumes of the sulphur remained, and was too strong for their liking.—EDS.]

A PLEASANT TRIP TO THE HEATHER.

[2055.] Back from the hills once more, having left behind our industrious little friends, snugly wrapped up—for the nights are chilly now in the glen—and securely located with a splendid outgo to the grand old hills just beginning to flush with the purple glow of the heather bloom.

For many years now we have made our annual double journey an undivided party, but this time, to the great regret of all, John, most careful and painstaking of bee-keepers (about whom his wife remarks, "It's a guid thing John hasna' his time in his ain hands, for he wad spend it a' among thae bees") has to remain behind at duty's call. His place is taken by "The Grieve"—a douce, quiet, lovable man, who has not accompanied the expedition since that eventful night when, our old "stance" being abandoned, "The Grieve" acted as our guide to the new "stance," and somehow went astray. I shall never forget that night. On trudged "The Grieve," and after him the lorry with about twenty hives, the rest of us walking alongside. We only realised that "The Grieve" had gone astray when we got in among some grand old trees, and halted beside a small lake, with the water-fowl scudding across it screaming out their alarm. We stood still. "The Grieve" pushed on, looking for some land-mark to guide him to the proper road. The water-fowl screamed, and the rain poured down. Gradually the others set off to look for "The Grieve," till I and a young lad were left with "Geordie," our genial driver. This was at three in the morning, in the policies of Fasque, the ancestral home of the Grand Old Man. The right road was found at last, our bees were safely set, and we home by the usual time as cheery as ever. We heard afterwards that the gamekeepers of Fasque, thinking we were poachers, and afraid to attack us alone, were rousing the neighbourhood as we moved away. My neighbour "Willie," most enthusiastic and expert, and I with "Willie's" eldest son and mine, complete the company this year.

The thirteen hives safely packed and the company stowed away somehow, "Geordie" sets off about 11 p.m. for our four hours' ride. Our talk is of bees in general, of our own bees in particular. What this hive has given and what that hive should have given. My hives are well known by name, and I tell of what "London" has done, and how much I have taken from "Raitt.' Then we must hear all about "Willie's" new "Wells," made during the past winter by the careful and skilful hands of John. I tell how Willie crammed every swarm that he got into "Wells," till now it is choked, sections and all, with bees. Sunny weather now and "Wells" will give a good account of itself. "The Grieve" tells how from his two hives last year he took over sixty perfect sections (1-lb.) of heather honey. We know that the tale is true, and our hopes rise high.

We reach our station before 3 a.m. and set to work unloading at once. We have a permanent seat, or "stance"—two parallel bars of wood, level, and at the right height, at the back of a stone dyke. Soon our hives are set, and quilts replaced—we travel quiltless, with a thin covering over sections to keep down bees—and everything made snug. Then the perforated zinc is removed from entrances, and the work is done. The sun is up by this time, and the hills are flushed with his rosy light and inviting us to climb. The air is pure and bracing, and we do not feel at all fatigued with our sleepless night. After a substantial breakfast in the farm kitchen we select our

hill and set off. As we rise the landscape widens. Away to the south-east lies the glorious Strathmore Valley, continued north-eastward by the Howe o'the Mearns. On the eastern border the sea shimmers in a hazy light, its nearer and brighter surface dotted with the dark sails of herring-boats. Through the valley we trace by their smoke the course of the North British and Caledonian trains, shooting northward and southward like a weaver's shuttle, through a web of green and gold. Smoke clouds here and there tell where some of Forfarshire's busy manufacturing towns lie, just waking up for the day's work. As we mount the grouse rise croaking and whirring, and we think of the 12th, and mark here and there the "driving huts." As we toil upward, some of the grandest peaks of the Grampians come into view, notably, Lochnagar—Byron's "Dark Lochnagar"—with a cup of mist, and dimly in the distance the hills around the Highland home of our Queen. A short rest on the heather at the top—just coming into bloom—and we begin the descent. As we go down, we carry with us two or three of the white stones with which the hills abound, for we always take this spoil home from the heather, and we each have a small rockery, annually growing larger—the fruit of our bee expeditions. Near the foot I dislodge a grand but huge specimen, and roll it down the hill. "Geordie", good man, allows it be placed with much labour on the lorry, and now it lies at my gate an object of much pride to its possessor, and admired by all who see it. The homeward journey is uneventful—all sleepy, all happy—and now, for some time, "My Heart's in the Highlands!"—SCHOOLMASTER, *Montrose, N.B.*

PROMOTING BEE-KEEPING.

[2056.] As the dairy show of October 12 will afford a fine opportunity for showing what sort of honey the country can produce—English, Irish, Scotch, and Welsh—will you endeavour to infuse into your readers all over the kingdom a very large measure of public spirit and inflame them with the desire and the purpose to make an entry in one or more of the five classes ere entries are closed, September 10? There is no time to be lost.

Public attention has been drawn frequently during the last twelve months to the advantage of encouraging the extension of British bee-keeping. I believe one can see an increased interest in the subject, and it is of great importance to sustain that interest so that it may have practical development. It has been an unfortunate season, but there are good samples of honey about in one form or another. Let bee-keepers resolve to make this year's dairy exhibit one of the finest on record. A really grand show of honey from every part of the kingdom will impress the metropolitan visitors and tradespeople with the importance and extent of the home honey industry. Let the county honey labels be prominently to the front; but the important thing to remember is that our bee-keepers have to make the show one of the best on record, and that the door closes September 10!—A KENT BEE-KEEPER, *August* 16.

HOW I COMMENCED BEE-KEEPING.

SOME USEFUL HINTS FOR BEGINNERS.

(*Concluded from p.* 326.)

There is a great difference in the amount of food required to tide stocks over winter. I hardly ever feed established stocks, and never take any honey from the brood box. Every stock I had came out strong this spring, except the one with the impervious quilt, and it was starved, although it had plenty of stores last October. Another lot of driven bees was made up in September on partially drawn out combs. I fed them for a while, but after they had taken down 5 or 6 lb. of honey, I was taken ill, and could do no more for them. The feeding-bottle was left on the whole winter, with no covering over it, just as I left them at the last time of feeding, and they came out very strong and fresh this spring. With regard to wintering I have come across cases which completely baffled me. I remember one case of a single driven stock in a skep. They took down very little food in autumn, the winter was a bad one, and many stocks—especially those in skeps—were lost by my neighbours, so that I gave them up for lost. On the first favourable occasion (it was about the middle of February) I examined them. I found about a pint of bees clustering on two or three pieces of comb on the crown of the hive. They had wintered practically without combs or stores. I at once started to feed them with warm syrup, and, before the honey-flow, that stock filled the skep with comb, and literally overflowed their habitation. I drove them early to prevent swarming, put them on foundation, and even that year they yielded surplus in their new home.

I have now seven strong stocks, all supered, and, until the recent rainfall, doing well.

I should advise any one starting with driven bees to first carefully read a description of driving, and then see it done before attempting it; and in commencing the use of a bar-frame hive, the novice should go and see one in actual use. More will be learned by a short time spent in actual examination than by any amount of reading.

In putting bees into a bar-frame hive, I always pack up a board level with the alighting-board, cover it with a cloth, and throw down the bees on the cloth; then with a big spoon (a big gravy spoon is a capital thing) I put a quantity of the bees nearer the entrance and leave them to run in. If I am putting two driven stocks together, I throw one on the top of the other, leaving the queens to

settle the question of supremacy in their own way.

When driving bees you often find three and four skeps on one board. In such a case, give the whole of them a dose of smoke, or when manipulating the one you wish to drive, you will have the whole street in an uproar, which will render the work the reverse of comfortable. I always take the hive quite away to some shady corner if there are other hives near, and put an empty skep in its place to receive the bees that return to the stand, which are added to the main body. The skep containing the driven bees is placed on a sheet and tied up ; the corners of the sheet knotted over the top, with a piece of strong twine tied tightly round the middle (outside), makes all secure. They may then, with care, be taken any distance.

In conclusion, I may say that the difficulties of beekeeping are more imaginary than real. Careful handling reduces the chances of stings to a minimum. I am not saying you won't get any stings, for you will, and at times plenty of them. Always leave the hands bare, but use a veil. Always have a bottle of strong ammonia at hand and a pair of tweezers. Draw out the sting, and rub well with the ammonia at once. There are also a few things it is as well to avoid. Don't be for ever pulling your bees about. Don't be trying every new thing you hear or read of. Don't be always thinking your queens must be getting old, and your hives need requeening. In the hands of an expert, and when beekeeping is a commercial pursuit pure and simple, re-queening may be an advantage ; but I don't think it necessary with the ordinary run of beekeepers. In my opinion the bees re-queen themselves oftener than many suppose.

Whenever you have the opportunity, see the apiaries of practical men. Beekeepers are very "clannish," and ever ready to help each other. Visit shows and examine the exhibits, and you will pick up a good deal of useful knowledge, besides having a standard before you at which to aim. "Make haste slowly." When you can manage one or two colonies successfully increase your apiary—and not till then.—S. I., *July* 30.

92 lb. FROM A STRAW SKEP.

[2057.] I took 92 lb. of honey from a large 18 by 12 skep on July 20. It was worked on the method of placing another stock by its side, and removing it from side to side, letting the flying bees enter the main stock, which I placed over nine frames, drove the bees down, and placed queen-excluder between ; but I have found they build drone-comb. I have worked five hives on the principle of starters under brood-nest, and in every case but one the bees built drone-comb, the exception being a Carniolan stock, which swarmed, although it had several frames under it some weeks before swarming. A friend has had similar experience of drone-comb being built from the starters placed under brood-nest.—Charles Harvey, *Stoke Prior, Worcestershire.*

Echoes from the Hives.

Castlederg, Ireland, August 3.—This apiary has never been so prosperous as at present. I have taken two racks of well-filled sections from a swarm hived early in July. Another stock which has not swarmed has thirteen standard frames in body-box, while in surplus chambers above are twenty-one shallow-frames, nine with wide ends and twelve spaced at the ordinary distance. The bees were so strong I had to give a rack of sections, which they have also nearly filled in ten days. I never saw such a stock of bees before. They would have swarmed if I had not cut out queen-cells. One swarm I got this season weighed 11 lb.—S. Crawford.

Queries and Replies.

[1132.] *Over-swarming.* — In the Bee Journal of May 3, query 1018, p. 175, you very kindly gave me information desired. The bees were packed according to instructions given me, and in spite of rough handling in transit arrived safely—comparatively. Like many bee-keepers in more southerly latitudes I have been much troubled with swarming One stock swarmed five times. The first time I placed an empty hive over them. They clustered on a potato ridge. They went in all right, but returned to their original hive next day. Seven days after they swarmed on to potatoes again. I hived them same as before ; again they returned to original hive. Twice again, after a lapse of eight days, they swarmed, and on each occasion returned to their original hive. Again they swarmed, when I hived them as before, and divided queen-cells between hives ; removed old hive to new stand. Next day found dead queen on ground. The last swarm came off a fortnight ago. On examination to-day I found no sign of brood. Weather here has been changeable, cold, and showery. 1. Do you think their broodless condition indicates queenlessness ? 2. I intend examining again on or about August 22, and if no brood is visible should I re-queen ? In spite of all, I have got eighteen sections surplus, and plenty of stores in two hives, and two good stocks.—W. J. Chalmers, *Orkney, August* 18.

Reply.—1. You render it difficult for us to give an opinion as to queenlessness or otherwise by omitting to give the dates of the first and subsequent swarms. A few days, how-

ever, will decide the matter by examining for eggs or brood. 2. If the stock is queenless, no time should be lost in either re-queening or uniting the bees to the other stock.

[1133.] *Queen Refusing to Breed Drones.*—1. I have been endeavouring to breed drones for the autumn by placing drone-combs in the centre of the brood nest between two frames of brood, but the queen absolutely refuses to lay in the drone-cells, but passes them over to deposit her eggs in those of worker-cells. Can you account for this? I have tried with three stocks, and met with the same result. 2. What will be the best way to proceed, seeing the season is already well advanced for late breeding of queens? I require about thirty queens, and do not care to go to the expense of paying the high price dealers are asking for these. All the drones in my apiary have been slaughtered. I was away for a holiday when this took place, or I should have retained the drones in one stock.—J. J. K., *Ware, August* 19.

Reply.—1. The refusal of queens to deposit eggs in drone-cells at this season is perfectly natural, and there are no means of inducing or compelling them to do so. It should be borne in mind that the instinct of bees is to destroy the drones in autumn, and that the queen shares this instinct. So that, although it is easy to keep drones alive by feeding the stock constantly, there are no means of compelling or inducing the queen to resume drone-breeding out of season. 2. The best course we can advise under the circumstances would be to make an offer, other than a "high price," to some dealer for a dozen or so of young queens, and be content to select an equal number of the queens now on hand, which it is most desirable to replace, retaining the others.

[1134.] *Loss of Queens.*—Having an ill-tempered stock, I wished to requeen it, so took the queen away and gave her to another queenless stock. I had a young laying queen in a nucleus, which I inserted three days afterwards, following all directions as given in Webster's "Book of Bee-keeping." This queen I found dead outside the hive two days afterwards. The old queen was apparently accepted by the other stock, but upon examination five days after insertion I found no queen or eggs. 1. Is it possible she can have gone back to the hive she came from? 2. An early swarm has swarmed three times, the cast I returned, which issued again in a few days, and another after that, which went away. As I was away from home I could not put it back, and found on my return the stock queenless and without brood or queen-cells. Is not this unusual? There is still plenty of heather and clover, but the bees appear to be taking down the honey from unsealed sections. 3. Would it be better to leave them on on the chance of the weather getting better, or to take them off now?—H. H. Woosnam, *August* 14.

Reply.—1. Whatever may be "possible," it is very improbable that the queen has gone back to her former home. It is more likely that she has been killed by the alien bees. 2. This seems simply a case of queen lost on her mating trip. Finding no queen-cells built under the circumstances was quite natural. 3. Better take the sections off, and secure what honey there is in them; if left on, it will most probably be taken down.

[1135.] May I ask you what I should do under the following circumstances?—I purchased last spring a frame-hive, but found the frames were not of standard size, and placed a new body box with fifteen frames below the old hive, which is, of course, now full. I want to take away the old hive. How should I do it? Is it necessary to examine for the queen and secure her presence below before I separate the hive? If she is removed with the old upper hive, will the bees supply the want? How can I get the bees out of the old combs, which will still have brood in them? I have had shallow frames over these bees, which have not swarmed, but have given me a good deal of honey. I only started keeping a few bees this year, and, with the aid of your book and journals, have succeeded fairly well. I bought three old hives of bees, and treated the other two as I did these (I am writing about), but succeeded in finding the queen in lower frames early in the season, and with an excluder was able to keep her below till the upper lot of bees hatched out, when I took away the old hives. But I could not find the queen in the third hive, and left her all the season, which seems to have answered. —W. E. Money, *St. Asaph, August* 19.

Reply.—The upper hive must be left on till the brood in it (if any) hatches out. Meantime, however, all broodless combs may be removed, and the bees shaken off them so as to induce them to take possession of the lower box, besides preventing further egg-laying therein. As brood hatches out the combs may be taken away till all are removed and bees compelled to occupy the lower ones.

[1136.] *Boxes for Holding Driven Bees.*—1. Will you please say what size "Hudson's dry soap-boxes," to hold three driven stocks, Mr. F. G. Cribb refers to in his letter on p. 505 of B.J. for December 21, 1893? 2. Could I drive the bees into the box with using a skep? — Cooper, *High Barnet, August* 14.

Reply.—1. Any box measuring about 16 in. by 8 in., and say 7 in. deep, will do. 2. Not well; the bees should be driven into a skep, and run into the boxes afterwards.

Bee Shows to Come.

August 23.—At Horsham. Twelve classes for bees, hives, and honey. Entries close August 18. Schedules from R. Gilburd, Horsham.

August 23.—At Madresfield, in connection with the Madresfield Agricultural Society; fourteen classes for bees, hives, and honey. Entries close August 18. Rev. E. Davenport, hon. sec, Burlish Lodge, Stourport.

August 29 and 30.—Annual show of the Staffs. B.K.A. At Stone. In connection with the Staffs Agricultural Society's meeting. Nineteen classes for bees, hives, honey, &c. Harold Twentyman, sec., Wolverhampton.

August 31.—At Knighton, Radnorshire. In connection with annual Flower Show Industrial Exhibition, Military Tournament, and Horse, Dog, and Poultry Show. Prizes for Sections, Extracted Honey, and Collections of Honey. Schedules from F. L. Green and Joseph Blower, hon. secs., Knighton.

September 4 and 5.—At Coventry. In connection with the Warwickshire Agricultural Show. Annual show of the Warwickshire B.K.A. Liberal prizes for honey, bees, and appliances. For schedules apply J. N. Bower, hon. sec., Knowle.

September 6.—At Castle Douglas, N.B. Very liberal special prizes for three 1-lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle Douglas, N.B.

September 12 and 13. — Scottish Bee-Keepers' Association, in connection with the show of the Caledonian Horticultural Society, Waverley Market, Edinburgh. Schedules now ready. John Wishart, assistant secretary, Castlecraig, Dolphinton, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries close September 11. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** Royal Lancs. Agricultural Show at Bolton.—We are requested to state that Mr. R. W. Nickson took second, not third, prize for twelve jars 1894 honey, as stated in report on p. 312.

Felix Bridgetts (Stoke-on-Trent).—If the "nest of wild, brown bees" are the ordinary honey-bee there is no reason why they should not do well under their new conditions, but if there is any doubt on the point, a couple of the bees should be sent to us for examination.

F. H. Taylor (Fallowfield).—We cannot guarantee sample to be cane sugar. If it is so guaranteed by the seller you might use it for bees

E. S.—Comb is affected with foul brood.

W. Benn (Birchfields).—No. 1 would be a very fair honey but for its being unripe when taken off the hive; this accounts for its being so thin in consistency. Its predominating flavour appears to be got from limes. No. 2 is from mixed flowers, and has no special flavour to mark its source—both are of fair quality. The character of No. 3 sample is poor enough to warrant your suspicions as to what it is from. It is partly honey, but very like sugar syrup. It is, however, not very likely that the fraudulent practice you mention is carried out by shopkeepers. The game would not be worth the candle. Your friend is in error. The bottle-feeder will not cause the food to "become aërated" if the syrup is properly prepared. But for autumn it is best to use the rapid-feeder.

W. (Aberpergwm). — *Extracting Heather Honey Two Years Old.*—No extractor will remove above. As the honey will probably be granulated we should melt it down by immersing the vessel containing the combs in hot water till all is melted; then lift off the cake of wax from top of the honey when cold.

J. T. (Lauder).—Top portion of cake is wax; the "spongy" part underneath is largely composed of pollen, and has very little wax in it.

North British (Banffshire).—1. The bees reached us smashed beyond recognition in post. From details given in note we do not see that there is any cause for alarm; but you are wrong in supposing that any "slaughter of the young bees has been resolved on." 2 There is no reason why a "Wells" hive should not be as capable of ventilation as other hives; but for several reasons we should not consider it a suitable time for conveyance to the heather.

Glenlivet.—The fact of the stock not having swarmed is no reason for supposing it queenless.

H. McGregor (Wye).—*Food Required for Winter.*—To be provisioned for winter the skeps should now weigh well on to 30 lb. each; but they had best be left for a week or two in order to see how the bees get on during that time in late gathering, and then feed-up to the extent of providing each with 20 lb. at least of winter stores at packing-up time—say last week in September. The sections should be at once removed.

Mid-Cheshire. — Judging by comb sent, the fault is with the queen, though there is

just a trace of foul brood in it. The queen is evidently worn out and a drone-breeder, making the stock in its present weak state quite worthless. You should use naphthaline in the other hives as a preventive of infection with twenty-four stocks on hand and foul brood so dangerously near.

CONSTANT READER (Newport). — *Judging Honey.*—The "points" for extracted honey are (1) flavour, (2) colour and clearness, (3) consistency — *i.e.*, denseness or specific gravity—(4) aroma, (5) neatness in whole exhibit. For sections, (1) purity of colour and evenness of comb-cappings, (2) perfectness of sealing, (3) quality of honey in comb, (4) neatness and cleanliness in putting up for exhibition. Beyond noting these points, only practical experience will enable anyone to judge correctly and well. *Plants and Flowers for Bees.*—We can send for sixpence (post free) a book on bee-pasturage, which gives all the plants and flowers suitable for bees, and times of sowing, &c., but it may be said that bees mainly rely on white clover, sainfoin, fruit-trees, limes, and heather for the main honey supply in this country.

"An Afternoon among the Bees in Scotland" is in type and will appear next week.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

HEALTHY 1894 FERTILE QUEEN, 3s. 6d. Miss SHARP, Lymington. E 96

HEALTHY DRIVEN BEES, with young Queen, 1s. 3d. lb., packed and put on rail free. S. BAILEY, Itchingfield, near Horsham. E 94

STRONG HEALTHY STOCKS, '94 Queens, Gayton Hives. Excellent condition. £1. ROSE, Feltham. E 88

WANTED, 4 DRIVEN SWARMS; EXCHANGE Jam, Pears, Plant Propagator, &c. NEWMAN, 57, Coldharbour-lane, London, S.E. E 87

FOR SALE, 4 Good STOCKS BEES and Appliances. Sold through leaving. Apply, J. HEADLAND, Station-road, New Barnet. E 92

FOUR 15-Months' HENS and MINORCA COCKEREL given in EXCHANGE for Honey or Appliances. Coniston-villa, Lelymead-avenue, Totterdown, Bristol. E 93

INDISPENSABLE to HONEY DEALERS. — HARGRAVE'S Folding Cardboard BOXES for 1-lb. Sections. Sample 3d. post free. HARGRAVE, Harrogate-road, Ripon.

FOR SALE, DRIVEN BEES, guaranteed healthy, at 1s. per lb., with Queen. No orders booked later than last day of August. Address, OWEN BROWNING, King's Somborne, Stockbridge, Hants. E 89

HEALTHY BEES, guaranteed, with 1894 Queens. 3-frame Nuclei, 8s.; 4-frame, 10s.; 5-frame, 12s. Also Healthy Driven Bees, 1s. 4d. per lb., in 5-lb. lots, with Queen. Apply, J. TREBBLE, Romansleigh, South Molton. E 91

DRIVEN BEES for SALE, 1s. per lb., with young Queen. Extra Queens, 2s. each. Guaranteed healthy. Cases returnable, or 1s. each. Apply, S. OATEN, Expert, Prior's Park Farm, Pitminster, Taunton. E 98

Prepaid Advertisements *(Continued)*

WANTED, at once, DRIVEN BEES, containing a Large Quantity of Ligurian or Carniolan DRONES. J. J. KER, St. Margaret's, near Ware. E 99

SOLID SAFETY BICYCLE, lamp, bell, brake, all complete, value £4; will EXCHANGE for Three Frame Hives and Bees. Apply, A. GOODING, Tennis Cottage, Maidstone-road, Rochester, Kent. E 100

72 STOCKS of BEES for £80; or singly, at following prices each Stock:—17 in Simmins' Economic Hives, 23s. 6d.; 20 Make-shift, 23s. 6d.; 8 strong Double-ended, 35s.; 10 skeps, 20s.; 4 Six-frame Boxes, 20s.; 12 Nuclei, 8s.; and 1 Sectioned Hive, 34s. 6d. WM. LANE, Peaton's Farm, Lytchett Matravers, Poole. E 95

BY Mr. THOS. NIELD. — Important SALE of 30 Hives of BEES, a large quantity of HONEY and Appliances, Fruit and Rose Trees, on WEDNESDAY, August 29th, 1894, at THE COTTAGE, Boden Hall, 2½ miles from Alsager, N.S. Railway, 3½ miles from Sandbach, per favour of Mr. Knight, who is leaving. Sale at 2 o'clock. E 97

WANTED, SECTIONS of HONEYCOMB (first quality). Prompt cash; packages sent. Any quantity. E. HURST, Bexhill, Sussex. 235

10 GOOD Healthy Straw Skeps of BEES, with Queen, 11s. each. Properly packed free on rail. R. BROWN, Flora Apiary, Somersham, Hunts. E 74

HEALTHY DRIVEN BEES, 1s. 3d. per lb., with young Queen. Packages free on rail. R. BROWN, Flora Apiary, Somersham, Hunts. E 73

THE CO-OPERATIVE SOCIETY'S SHOW.—Glazed SECTION-CASES (both sides) for Exhibition or Sale. 18s. per gross, or 1s. 9d. per doz. J. GREENHILL, 80, Graham-road, Wimbledon.

HEALTHY DRIVEN BEES, 1s. 3d. per lb.; in 5-lb. lots. Boxes to be returned. E. LONG, Cottingham, Cambs. E 70

HEALTHY DRIVEN BEES, 1s. 6d. per lb. for 4 lb. lots or over, Queen included; packing free. F. GAY, Edmondsham, Cranborne, Salisbury. E 71

FOR SALE, Young Fertile Native QUEENS, 3s. 6d. each. Also strong Stocks of Healthy Natives, with young Queens on Standard Frames, with or without hives. H. WITT, South Ascot, Berks. E 84

GUARANTEED Healthy 1894 FERTILE QUEENS, 3s. 6d. each; safe arrival and introduction. DRIVEN BEES, 1s. 3d. per lb. for 5-lb. lots or over, Queen and Packing included. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. E 89

LACE PAPER for GLAZING SECTIONS. Three neat patterns, 100 strips, 22 inches long, 8d., post free, 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

HONEY.—Finest White Clover and Heather HONEY WANTED. Post samples and lowest prices, stating quantities. SPRING, Brigg, Lincs.

MARKET for SECTIONS, EXTRACTED HONEY, and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

CHOICE YOUNG QUEENS, excellent strain, produced by seven years' careful breeding, guaranteed fertile, post free 5s., virgins, 2s. 6d. Rev. C. BERRETON, Pulborough, Sussex. 229

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

MODERN BEE-KEEPING.

New Edition. 64th Thousand.

In course of preparation. Fully Revised throughout. Ready in a few weeks. Terms for Advertisements upon application to the Secretary of the British Bee-Keepers' Association, JOHN HUCKLE, King's Langley, Herts.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

A meeting of representatives of the Northern and Midland Affiliated Associations was held at Shrewsbury on Wednesday last in connection with the annual exhibition of the Shropshire Association. The meeting was a large and influential one, representatives being present from the counties of Glamorgan, Hereford, Notts, Lancashire, Cheshire, Staffs, Salop, and Leicestershire. Mr. W. Broughton Carr and Mr. Jesse Garratt, members of the committee, and the secretary of the B.B.K.A., were also present. Considerable interest was taken in the business of the meeting, prior to which the representatives were hospitably entertained to luncheon by the executive of the Shropshire Association.

The principal item on the agenda was "The consideration of the best means for giving effect to the recommendations of the Northern Association's Meeting, held in 1893, in respect to the formation of centres for conducting third-class examinations."

The Rev. J. F. Buckler (Lancashire and Cheshire) was voted to the chair. In opening the proceedings, the chairman said he thought the first duty of the meeting was to express its thanks to the executive of the Shropshire Association for their kind invitation to hold their meeting at Shrewsbury, and for the hospitality which had been extended to the representatives; the vote of thanks was carried with acclamation.

The secretary read the report of the meeting held at Shrewsbury on August 23, 1893. Thereupon, after some discussion, Mr. McClure moved:—"That the British Bee-keepers' Association be recommended to make application to the several affiliated associations for recommendations as to the formation of centres for examinations of candidates for third-class certificates during the following year, and that the British Bee-keepers' Association do select such centres from the applications received as seem to them desirable, and print the same in their annual report." Mr. Scattergood (Notts) seconded the resolution.

Considerable discussion followed as to the most suitable times and places for holding such examinations. Mr. Pugh (Notts) considered that the second day of an exhibition was most suitable, as giving the candidates the opportunity of attending the exhibition and undergoing the examination at a moderate cost.

Mr. Carr considered that in many cases it would be found difficult for a judge who came down from the central society for the purpose of judging at a show to stay a second day to conduct these examinations; and he was of opinion that the examinations should be quite free from all show work. Mr. Alfred Watkins (Hereford) strongly supported Mr. Carr's views. Dr. Jones (Lancashire) supported Mr. Pugh's suggestion. He considered the candidate should be taken into consideration.

Mr. Garratt was of opinion that where a candidate was in earnest to gain the certificate little or no difficulty would arise.

Miss Eyton (Shropshire) suggested that candidates who merely required certificates for honour should not be encouraged, but those who required them for teaching bee-keeping should receive some consideration.

Mr. Bunney (Glamorgan) suggested that centres should be arranged other than at shows. A representative whose name did not reach us inquired whether any county should not be allowed to have a centre to itself. Mr. Watkins further suggested that the meeting should give the committee of the B.B.K.A. some idea of the counties that should form a group for a centre. Mr. Garratt considered that it would be well to pass Mr. McClure's resolution with some such suggestion added as mentioned by Mr. Watkins.

Mr. McClure, in replying to the discussion, was of opinion that the formation of centres should be left in the hands of the central authority, who would be the best judges, after receiving the applications from the several affiliated associations.

The resolution was carried.

Mr. Pugh moved "That it be recommended to the B.B.K.A. that where possible such examinations be held on the second day of a county show." Seconded by Mr. Meadows (Leicester), and carried.

Mr. McClure moved "That the British Bee-Keepers' Association be asked to arrange examinations for scientific lecturers at agricultural schools and institutions."

Mr. Bennion (director of Technical Instruction for the county of Lancashire), at the request of the chairman, addressed the meeting in support of Mr. McClure's resolution. He considered that it was very desirable that such men as were referred to in Mr. McClure's resolution should be forthcoming whenever any public body was prepared to employ them to lecture on the subject. The knowledge which such lecturers imparted would tend to increase the interest which had already been created in the subject of bee-keeping.

Mr. Carr reminded the meeting that the committee of the central society had already taken this subject in hand, and were giving their best attention to it. Mr. McClure was glad to hear that the central committee had this matter under consideration; there was no body that could deal with the subject so satisfactorily as the British Bee-Keepers' Association, and it was very desirable that they should undertake it. He considered that the resolution which he had proposed as expressing the opinion of this meeting would greatly strengthen their hands in dealing with the subject.

The resolution was carried.

A strong expression of opinion was mani-

fested that similar meetings should be held at Shrewsbury in future years.

A vote of thanks to the chairman closed the proceedings.

THE COMING DAIRY SHOW

AT THE AGRICULTURAL HALL.

A correspondent writes:—"You cannot urge too strongly on bee-keepers in every one of our counties the importance of making the honey exhibits at the coming dairy show the best representative collection ever seen in the metropolis. Bee-keepers in Ireland and Wales, England, and Scotland should vie with each other in showing what each county can produce. Heather, clover, sainfoin, and lime honey must be there in abundance. Exhibitors who are sellers of honey should know that even if they do not gain prizes, they obtain a fine advertisement and almost certain market for all they send, and probable customers for future seasons.

"But samples of fine honey will not alone suffice. The exhibition must be one that will instruct and therefore attract visitors, for it is our duty to interest people in the subject of honey and honey products. We too often allow our honey shows to become the counterpart of a shop window—a mere assemblage of honey pots, without showing people how we work for the honey they contain—it is the process of production that interests people and instructs them, not the mere exhibition of the product. Those who have the arrangements for the honey section must bring together a number of non-competitive exhibits, objects which will illustrate the work of the bee-keeper. An antiquated straw skep with built-out combs; an improved flat-topped skep, with top aperture for feeding and supering; and then a furnished frame-hive and combs will make the process of development towards the modern system quite plain to visitors who are not bee-keepers (we must remember that perhaps not one in a thousand keeps or understands bees); combs of live bees; queen-cells, &c.; diagrams; honey products and how to make them, such as mead and honey vinegar, will contribute to raise the exhibition to a level of interest far above that of an ordinary competition. It will attract attention, and when you excite curiosity on any subject it begets a desire to understand more about it.

"The stewards who will help at the show will be skilful bee-keepers, and be present to explain exhibits and answer questions; they will also be there in the interests of the honey exhibitors to sell the exhibits. Glazed combs of foul-brood in its mild and aggravated forms should be shown, and the remedies and precautions at present advocated.

"The first thing to urge on bee-keepers is the importance of sending in entries, one at least from every county. September 10 is very close—not a moment to be lost. Every one who has a choice sample should make a point of exhibiting it. This being done, there will be plenty of time to arrange for the supplemental part of the show. There will be no lack of volunteers, and no difficulty in collecting objects. We must beget an interest in the home-honey industry and home-made-honey products, so as to increase the demand and the preference for British honey. Make a firm impression in the minds of the many that 'British honey is the best!'"

SCOTTISH BEE-KEEPERS ASSOCIATION.

The autumn show promises to be a success. It is to be held as usual in conjunction with the magnificent exhibition of the Royal Caledonian Horticultural Society in the Waverley Market, Edinburgh, on September 12 and 13. The Waverley Market is admirably adapted for a honey show, and it has the advantage of adjoining the railway termini of several systems. Easy and economical transit from all parts of the country is thus assured. The prize-list is a very liberal one, and all classes of bee-keepers are provided for—from the cottager with his half-dozen hives to the possessor of the largest apiary in the country. There are two classes for displays of honey, the prize money in these classes alone amounting to £11. 10s. The remainder of the comb-honey classes are for supers and sections, an equal number being devoted to the products of flowers and heather. Two classes are reserved to members of the Scottish Bee-Keepers' Association who do not possess more than six stocks of bees. Extracted honey has never been so much in vogue on Scottish tables as that in the comb, but the prizes offered for competition next month should bring out a good entry both from England and Scotland, especially in the "special" class for three 1-lb. jars of flower honey, for which most liberal prizes are offered. Encouraged by the success of the confectionery classes at former shows, the competition for cakes containing honey will be repeated. The awards in this class will be made by Lady Gibson Carmichael. The other judges are Messrs. Carnegie, Clark (Hon. Sec. Roxburghshire B.K.A.), Greig (Hon. Sec. Berwickshire B.K.A.), Meldrum, Logierait, Ballinluig, and Wilson (Hon. Sec. South of Scotland B.K.A.). Schedules and all information may be obtained from the Assistant Secretary of the Scottish Bee-Keepers' Association, Mr. John Wishart, Castlecraig, Dolphinton.

SHROPSHIRE BEE-KEPERS' ASSOCIATION.

SHOW AT SHREWSBURY.

This popular annual show of bee produce was held as usual in connection with the exhibition and fête of the Shropshire Horticultural Society in the picturesque grounds known as

"The Quarry," Shrewsbury, on August 22 and 23. The Shropshire B.K.A. are to be congratulated on their good fortune in having their exhibition associated with so enormous a gathering of visitors as usually assemble in The Quarry during the two days over which the fête extends, nor was the honey show unworthy of so large a meeting, for it was in itself decidedly a big show—so "big" that few such exhibitions can compare to it for the weight of honey staged.

There were 267 entries in the forty classes into which the exhibits were divided; the number of entries, however, large though they be, scarcely indicate the extent of the display, because in several classes each exhibit contains about four times the quantity of honey usually staged in competition, thus bringing up a total of very large dimensions.

Some fine samples were shown in every class, and it was matter of regret to see good exhibits unplaced by reason of their very number. Where so many were good, we need not particularise, except to give a special word of praise to the honey trophies and collections of bee-flowers, all of which reflected much credit on the exhibitors. Mr. Alfred Watkins's fine collection of lantern-slides and beautiful stereoscopic views of subjects connected with bee-culture were also greatly admired by interested visitors.

Miss Eyton, the hon. secretary of the association, in the arduous task of arranging so extensive an exhibition, spared no labour in making it a success, and, aided by a staff of energetic assistants, everything went off well; the only regret being that the gloriously fine weather of the opening day did not continue on the second, heavy rain seriously interfering with the comfort and pleasure of visitors on the closing day of the fête.

The duties of judging were undertaken by the Rev. J. F. Buckler, Mr. Jesse Garratt, and Mr. W. Broughton Carr.

During both days of the show Mr. W. P. Meadows, of Syston, delivered lectures on bee-keeping in a tent contiguous to that in which the produce was staged.

Prize List.

HONEY (OPEN CLASSES).

Forty-eight 1-*lb. Sections.*—1st, T. Cartwright, Shrewsbury; 2nd, W. G. Preece, Shrewsbury.

Twelve 1-*lb. Sections.*—1st, F. M. Bryans, Malpas, Cheshire; 2nd, Miss T. Ward, Hadnall Hall, Salop; com., T. Teldon, Umberleigh, Barnstaple.

Forty-eight 1-*lb. Jars Extracted Honey.*—1st, T. Cartwright; 2nd, J. Carver, Heygate, Wellington; h.c., T. Horton, Harty Tower, Much Wenlock; com., B. G. Brocklehurst, Ludlow.

Twenty-four 1-*lb. Jars Extracted Honey.*—1st, B. G. Brocklehurst; 2nd, J. Carver; h.c., G. Stocks, Cuddington, Northwich; h.c., J. H. Collier, Stafford.

Twenty-four 1-*lb. Jars Granulated Honey.*—1st, F. W. Norris, Theanes, Substrood; no 2nd awarded.

Collection of Distinct Varieties of Honey.—1st, A. Beale, Shrewsbury.

Six 1 *lb. Sections* (Blow's Sections only).—1st, Ed. Oakes, Lower Church-road, Broseley; 2nd, E. Pee, Bridgnorth.

Six 1-*lb. Jars Extracted Honey* (Blow's Jars only).—1st, T. Cartwright; 2nd, B. G. Brocklehurst; h.c., T. E. Clark and J. Pritchard, Buckhill; com., T. Tetley Nickels, Shrewsbury.

Forty-eight 1-*lb. Sections* (Members of S.B.K.A. only). — 1st, Phil. Jones, Church Stretton; 2nd, T. Cartwright.

Twelve 1-*lb. Sections.* — 1st, T. Tetley Nickels; 2nd, T. Horton; com., P. Scott, Broseley.

Single 1-*lb. Sections.*—1st, T. W. Norris; 2nd, Phil. Jones; com., J. Bradley, Yockleton.

Forty-eight 1-*lb. Jars Extracted Honey.*—1st, B. G. Brocklehurst; 2nd, J. N. Critchlow, Newcastle, Staffs.

Twenty-four 1-*lb. Jars Extracted Honey.*—1st, B. G. Brocklehurst; 2nd, T. W. Norris.

24 *lb. Dark Extracted Honey.* — 1st, J. Carver; 2nd, Ed. Oakes.

Novelty in Honey or Wax.—1st, J. N. Critchlow.

Honey Trophy (Open).—1st, J. Bradley; 2nd, J. N. Critchlow; 2rd, T. Tetley Nickels.

Best Hive (price not over 15s.).—1st, C. Redshaw, South Wigston; 2nd, R. C. Collis, Wellington.

Best Hive (price not limited).—1st, W. P. Meadows, Syston, Leicester; 2nd, C. Redshaw.

Collection of Appliances. — 1st, W. P. Meadows.

New Invention. — 1st and h.c., W. P. Meadows.

Brood Foundation.—1st, W. P. Meadows; h.c., A. Beale.

Super Foundation.—1st, A. Beale; h.c., W. P. Meadows.

1st, Rev. G. W. Bancks, Dartford.

Honey Beverage.—1st, Rev. G. W. Bancks.

Fruit Preserved in Honey.—1st, Mrs. G. Lloyd, Wellington.

Honey Cake.—1st, Rev. G. W. Bancks.

Beeswax.—1st, J. Carver; h.c., A. Beale and P. Scott.

Honey Vinegar.—1st, J. Bradley.

Bee Flowers.—1st, G. Lloyd, Overby; 2nd, J. Bradly; 3rd, A. Beale.

Bees in Observatory Hive.—1st, J. Carver; 2nd, A. Beale.

ARTISANS' CLASSES.

Twenty-four 1-*lb. Comb Honey.*—1st, T. W. Norris; 2nd, Phil Jones.

Twelve 1-*lb. Sections.*—1st, J. Hammond, Church Stretton; 2nd, Ed. Brookfield, Middle, Salop.

Twenty-four 1-*lb. Jars Extracted Honey.*—1st, Geo. Bullock, Craven Arms; 2nd, J. Pritchard.

Super of Comb Honey.—1st, A. Beale.

COTTAGERS' CLASSES.

Twelve lbs. Comb Honey.—1st, R. Gough, Crudginton; 2nd, J. T. Croxton, Hope Bowdler.

Twelve lbs. Extracted Honey.—1st, J. Hammond; 2nd, J. Thuher, Allscott.

Six 1-lb. Sections.—1st, C. Mainwaring, Churton; 2nd, J. T. Croxton, Hope Bowdler; 3rd, R. Gough.

Six 1-lb. Jars Extracted Honey.—1st, C. Mainwaring; 2nd, J. Hammond; 3rd, G. Croxton, Yorton.

Honey Cake.—1st, Mrs. G. Lloyd; com., Mrs. J. Thuber.

Single 1-lb. Jar Run Honey.—1st, G. Croxton, Yorton; 2nd, W. Blower, Shrewsbury.

Single 1-lb. Section.—1st, J. T. Croxton, Hope Bowdler; 2nd, G. Croxton, Yorton.

Bee Flowers.—1st, G. Lloyd.

The prizes were distributed in the adjoining tent by Miss Eyton, assisted by Miss Alice Downward, of the Castle, Shrewsbury, at three o'clock on the second day of the exhibition.

The Rev. E. Donald Carr, chairman of the committee, presided, and the list of prizes-winners were read out by Mr. Palmer.

At the close of the distribution the Chairman moved a vote of thanks to Miss Eyton for her kindness in distributing the prizes, and highly eulogised that lady for the energy, tact, and skill which she had displayed in producing such results as were to be witnessed in the adjoining tent; in a word, he (the chairman) might say that Miss Eyton was the life and soul of the work. The vote was passed with hearty cheers.

Miss Eyton, in returning thanks, expressed the hope that there would be more entries in the cottagers' classes another year.

SHOW AT MILFORD, DERBY.

The fourth honey show in connection with the Milford Cottage Garden Society was held on July 28, and was a better show than any held in previous years. There was a good competition in all classes, and the exhibits were of good quality. The class for medals, &c., "offered by the Derbyshire B.K.A.," brought fine exhibits, which were in advance of other years. Mr. T. W. Atkins was the judge, and his awards were as follows:—

Bees in Observatory Hives.—1st, G. Pallerd, Makeney, near Derby; 2nd, J. Horsley, Holbrook; 3rd, J. Rowland, Holbrook.

Twelve 1-lb. Jars Extracted Honey.—1st, Mrs. G. H. Strutt, Belper; 2nd, G. Pallerd; 3rd, G. Brindley, Makeney.

Twelve 1-lb. Sections.—1st, J. Rowland; 2nd, G. Pallerd; 3rd, W. Spencer, Belper.

Best Shallow Frame.—1st, J. B. Mart, Duffield, near Derby; 2nd, G. Pallerd; 3rd, J. Rowland.

Prizes given by D.B.K.A. for six 1-lb. Bottles Run Honey and six 1-lb. Sections.—1st, G. Pallerd; 2nd, J. Rowland; 3rd, G. Brindley; 4th, H. Johnson.—(*Communicated.*)

BERKS BEE-KEEPERS' ASSOCIATION.

The Windsor district of this association, which comprises Maidenhead, Winkfield, Ascot, and surrounding neighbourhood, held a most successful exhibition of honey, in conjunction with the Maidenhead Horticultural Society, on August 16. Prizes were awarded amounting to about £7, and a total weight of nearly 800 lb. of honey, exceptionally good in quality, was staged in sections and jars. The exhibits, nearly all bearing the label of the County Association, formed a very pretty collection. About 600 lb. weight was sold. The bee tent attended with the usual demonstrations and lectures. The Windsor District Committee, with their energetic hon. secretary, Mr. W. S. Darby, are to be congratulated upon their successful management. The judges were Mr. W. H. Harris and Mr. G. P. Cartland, whose awards were as follows:—

OPEN CLASSES.

Collection of Hives and Appliances.—1st, W. G. Stoneham.

Best and most complete Hive.—1st, Chas. Redshaw; 2nd, E. W. Goddard.

Rapid Bee-Feeder.—1st, Chas. Redshaw.

Observatory Hive.—1st, J. S. Greenhill.

Bee Flora.—1st, Henry Attfield.

Twelve 1-lb. Sections.—1st, H. W. Seymour; 2nd, J. Butler.

Six 1-lb. Sections.—1st, H. W. Symour; 2nd, George Head.

For the Best Twelve Jars Extracted Honey.—1st, Albert Head; 2nd, H. W. Seymour.

Six 1-lb. Jars Extracted Honey.—1st, Albert Head; 2nd, E. W. Flower.

MEMBERS OF BERKS B.K.A. ONLY.

Exhibit of Comb and Extracted Honey.—1st, H. W. Seymour; 2nd J. Butler.

Twelve 1-lb. Sections, in Blow's Sections.—1st. Geo. Head; 2nd, W. H. Seymour.

Twelve 1-lb. Jars Extracted Honey (in Blow's Screw Cap Jars).—1st, George Worsfold; 2nd, George Head.

Six 1-lb. Sections (Windsor District only).—1st, Mark Pottinger; 2nd, George Head.

Six 1-lb. Jars Extracted Honey.—1st, Geo. Head; 2nd, George Worsfold. (*Communicated.*)

DERBYSHIRE BEE-KEEPERS' ASSOCIATION.

The thirteenth annual exhibition under the auspices of the Derbyshire Bee-keepers' Association took place in conjunction with the Agricultural Show on August 22 and 23, and proved most successful. There was a grand display of bees, honey, wax, and appliances, and the exhibition eclipsed any show held in previous years. The entries were far above the average, and characterised by all-round excellence. There were sixteen exhibits of live bees, 110 entries of honey, and twenty-four for beeswax, the whole exhibition being most meritorious. The judging was undertaken by Mr. C. N. White, assisted by Mr. W. Burgin and Mr. G. H. Wilson.

PRIZE LIST.

Observatory Hive with Bees. — 1st, C. H. Dyche, Burton ; 2nd, H. Hill, Ambaston ; 3rd, T. Walker, Derby ; h c C. Wootton, Draycott, and H. C. Jacques, Burton.

Observatory Hive with Bees (Cottagers only).—1st, A. Pearman, Derby ; 2nd, C. Clarke, Loscoe Grange.

Twelve 1-*lb. Sections* (Members only).—1st, J. Stone, Little Cubley ; 2nd, T. Toone, Etwall ; 3rd, Hon. C. Coke, Longford ; h c R. Giles, Etwall.

Twelve lb. Sections.— 1st. T. W. Jones, Etwall ; 2nd, G. W. Foster, Brailsford ; 3rd, J. Woodhead, Inkersoll.

Twelve 1-*lb. Jars of Extracted Honey.*—1st, F. Walker, Derby ; 2nd, H. C. Jacques ; 3rd, Mrs. Strutt, Belper ; 4th, W. Southall, Borrowash.

Twelve 1-*lb. Jars Extracted Honey* (Cottagers only).—1st, J. Kirkland, Derby ; 2nd, R. Bridges ; 3rd, J. R. Bridges, Harstoft ; 4th, T. M. Bryant, Clay Cr ss.

Twelve 1-*lb. Jars of Granulated Honey* (Open to all England). — 1st, R. Bridges, Harstoft ; 2nd, H. Hill ; 3rd, J. Stone ; h c W. T. Atkins, Derby.

Six 1-*lb. Sections* (Members only).—1st, R. Giles, Etwall ; 2nd, J. Stone.

Six 1-*lb. Bottles or Jars Extracted Honey.* —1st, J. R. Bridges ; 2nd, J. Stone.

Exhibit of Honey in any form (Selling Class, Members only).—1st. J. Stone ; 2nd, M. Wootton, Draycott ; 3rd, T. Austin, Alvaston ; h c A. Cooper, Sunny Hill.

Bees-wax.—1st. F. Walker ; 2nd, H. Hill.

Bees-wax (Cottagers only). — 1st, J. R. Bridges ; 2nd, H. Meakin, Newthorpe ; special, J. Woodhead.

Collection of Appliances. — 1st, C. Redshaw, South Wigston.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

NOTES BY THE WAY.

[2057.] We have reached the end of August, and the season of the year when the prudent bee-keeper will begin to prepare for another season. It is by forethought and doing everything in season that success is deserved, if not attained ; but, I must add, that it is mostly attained. I hear of stocks in some parts running short of food—that is, the bees have stored nearly all their gatherings in the super, and the bee-master, having taken this from the hives, must see that the stocks do not suffer in consequence. If feeding is required, do so slowly at first, to induce breeding ; then in a week or ten days give sufficient for winter stores rapidly. Late in August and early in September is the best time to feed in winter stores. Use the pure Demerara sugar in making your syrup, and add a very little salt, but no vinegar.

There are many ways of making syrup. I pour boiling water on the sugar and stir till dissolved ; some boil the syrup for five minutes, and another uses a percolater in making syrup, using cold water only.

Look through your apiary for queenless colonies. After a swarming season there are generally some that have practically swarmed themselves to death. If such are found, procure a queen, if sufficient bees remain to build up a colony ; or get some driven bees and unite to the stock. Paint your hives during next month, if required, and when packing hives for winter, don't fail to drop two or three little lumps of naphthaline in each hive—or, say, one in each corner. A chaff cushion filled loosely will lay over your quilts, and will not harbour earwigs and moths so much as "ole clo'," and prove warmer during the winter.

The writer of 2054 (p. 334) ought to have chosen another heading than "The Canadian Method" in his attempt to deal with his foul-broody stock. In the first place, the Canadian—or, more properly, Mr. McEvoy's method—is to use the same hive, no cleansing in any way, and he, McEvoy, very pertinently says, if your hive requires boiling or fumigating, why don't you boil your bees well. Certainly, if the matter of cleansing the hives is so very important, what of the matter of cleansing the bees, the creatures that have been bred amidst so much of the rotting matter, bees that have inhaled the contaminating atmosphere of the interior of a hive in which the foul-brood has been reeking the whole period of their existence. On the face of it, one would expect the bees to require a thorough course of medicine before there was the slightest chance of curing a disease that is so insidious and tenacious as foul-brood.

Yet McEvoy cures by his method—simply shake the bees off the foul combs, give them starters for four days, then remove the comb built in the frames during the four days, and give them full sheets of foundation. All this is best effected at the beginning of the honey harvest. At this period of the year constant feeding will be required, and stocks weakened by the disease should be united to give strength to the driven colony to go on with comb-building. But to return to our friend's attempt. His failure was evidently caused by the continued fumigation of his hive with sulphur. No doubt the interior of the hive was covered with flowers of sulphur, if he

had examined it with a microscope. Then another important point he missed was doing the work at or after sunset, so that there should not be any chance of his other stocks getting a taste of any honey from the hive with the risk of carrying the pest to other hives. If the hive had been scraped out and scrubbed with hot-water and soft soap and well dried, he would have had no difficulty with the bees leaving the hive. I opine it was the late hiving and bottle of syrup that induced them to stay at last, but the point "M. K." refers to about McEvoy's treatment, and the loss of a season to the bee-keeper, in parenthesis, I ask what is the loss of one season compared to the bonfire method where bees, hives, and contents are all lost. "M. K." says in April and May the hive got no stronger, an admission that the colony would not have gathered a harvest for the bee-keeper if no attempt had been made to cure the stock; possibly if the cure had been made in May the cured colony would have built up strong, and gathered a surplus in July. I trust our readers will not think that I wish to find fault in my criticism. I can assure them my only wish is to elucidate the truth and give help. The risk of keeping the old foul combs about for a month when bees are on the prowl for a taste of anything sweet is very great. I hope to hear later on that "M. K." has got his stock cured.

The sale of the honey crop will be a worry to some, to others a pleasure. Study your market, supply the quantities in nice, clean receptacles at a moderate retail price, and thus you will create a home market, where you will be extending the use of honey, benefiting your neighbours and yourself at the same time.—W. Woodley, *Beedon, Newbury.*

MY FIRST EXPERIENCE WITH A "WELLS" HIVE.

[2058.] Last autumn I, like many more, had the "Wells" craze on, and I thought I should like to try it, so I made a hive to take twenty-two frames in the brood nest, and stocked this from two hives that had queens of '93, besides plenty of bees and stores. I packed them well down for winter, and in the spring of this year stimulated them with syrup and the bees increased very fast—indeed, so fast that, by the middle of May, I was obliged to give them a super of drawn-out combs in standard frames spaced with the new "wide ends," eighteen of these filling the upper chamber. They got well to work in this super, and I was obliged to add another eighteen frames above, and this was very soon filled with bees. The roar in front of stock hive at night was something tremendous, and the hive looked like a gigantic dog-kennel with its three tiers of frames and roof. The weight of honey from the first super taken off, when extracted, was 120 lb., and from the second super, 63 lb., making a total of 183 lb. Not having touched the honey in brood-chamber, I call this not a bad "take," Messrs. Editors, and I think you will say the same, considering this season. I have compared notes with my single hives, and my best hive yielded 73 lb. The "Wells" has not swarmed, and is at this time in splendid condition. I mean to go in more for Mr. Wells' system, and tender him many thanks for introducing it to us bee keepers and the public. It matters not a jot to me whether the hive is called one or two stocks, if (as I have proved) it works well. I think it answers better for extracted than sections, as the bees are less likely to swarm.—A. Nicholls, *St. John's Wood, Hazlemere, Bucks, August* 19.

AN AFTERNOON AMONG THE BEES IN SCOTLAND.

[2059.] Having received an invitation to spend an afternoon among the bees belonging to two well-known and prominent members of the South of Scotland Bee-Keepers' Association, some fifteen of us, members of the Auldgirth Bee-Keepers' Association, found ourselves occupying a waggonette at one p.m. on Saturday the 14th ult., and bowling along merrily towards Dumfries, the weather being fine and the surroundings all that could be wished for. On arriving at Dumfries we were joined by Mr. Sidney Roebuck, who was to be our guide for the day, and, after a beautiful drive of two miles we reached "Acrehead," the residence of Mr. Wm. Wilson, whom we knew as a bee-keeper of the first flight, as his many honours won on the show-bench testify. Mr. Wilson was soon in evidence, welcoming all with a hearty handshake, and after supplying bee-veils to those who preferred them, at once conducted us to the apiary. The hives, thirty-five in number, are in rows facing south-west, and are mostly of the bar-frame type, with a few "Stewartons," and also of the much-discussed "Wells" pattern. They stand on ashes, and are surrounded on three sides by a fence, the fourth side being occupied by Mr. Wilson's residence, a window of which commands a view of the whole apiary.

On removing some of the roofs or covers, it was a sight for us bee-men to see such racks of sections, boxes of frames for extracting, and supers of various shapes and sizes, everywhere well forward, many having the combs already sealed. Attention was specially directed to a fine octagon super on a "Stewarton" hive, which was considered unusually good. The latter hive is evidently a favourite with our host, who prides himself on the fine supers he secures from them. Mrs. Wilson now appeared to welcome us, which she did as heartily as her husband, and we could soon perceive that our hostess was herself a bee-keeper, in so far as materially assisting in the management of the apiary, an example bee-keepers would no doubt like to see more generally followed by their "better halves."

At this juncture our party was joined by several other members of the South of Scotland Bee-Keepers' Association, and refreshments were partaken of, after which our investigations among the bees were resumed, an interesting operation being the procuring of a queen-cell from one hive and inserting it in another which was queenless. Some of our company, though bee-keepers, had never seen the extractor used, and so it was determined to do a little extracting. A box of beautifully-sealed combs were taken off a hive, the necessary implements got ready, and in a very short time newly-extracted honey of excellent quality was handed round for "sampling." We next had a look at a "Wells" hive, and found nearly all the perforations of the dummy filled up with propolis. Nucleus hives were then examined, in which young queens were being successfully reared for requeening in autumn. And, after being occupied in various ways especially delightful to bee-keepers, we wound up our sight-seeing by being shown a wasp's nest in process of construction in a corner of the apiary.

Time was now about up, and so, after acknowledging the hospitality extended to the party, and the pleasure derived from what we had seen, we bade good-bye to our hostess. The conveyance was soon reloaded, and we were on our way back to Dumfries, this time accompanied by Mr. Wilson. Arrived there, we were conducted to one of the Town-halls, where our entertainers had provided a repast, which was partaken of with appetites sharpened by our drive. This over, some time was pleasantly and profitably spent in discussing "Bees and Bee-keeping," Mr. Roebuck, who presided, opening the discussion in a few appropriate remarks. A move was next made to the latter gentleman's apiary, and here again were found some thirty hives in the best possible condition, with supers, "designs," bell-glasses, sections, and frames for extracting, many already sealed and fit for taking off. But the sun had now sunk behind the Nithsdale hills, and the gathering twilight warned us of the time for starting on our homeward journey. A move was, therefore, made towards the rendezvous, where a "stirrup glass" was partaken of, and, amid good wishes of all kinds towards our hospitable entertainers, we again mounted our conveyance, when an hour's drive landed each one to his respective home, delighted at having had a thoroughly-enjoyable "afternoon among the bees." — Wm. Clark, for Auldgirth Bee-keepers' Association, Dumfriesshire.

LOSS OF STOCK OF BEES.

I shall be greatly obliged if you can give me an explanation of the following :—All my hives came through last winter satisfactorily, and were well forward in March. In April I found one short of stores, so fed for a fortnight, when they appeared to go on all right. About the middle of May these bees commenced fighting, apparently amongst themselves, and have continued to do so all the summer ; daily they have turned out hundreds, until the ground has been literally black with dying bees—young bees with only their wings injured, so far as I could see ; furthermore, they were collecting little or no honey. A few days ago I found they had absolutely not an ounce of stores, and a lot of bees were already dead, so I commenced feeding, but too late, as they were too weak to take the syrup. To-day I have thoroughly overhauled the combs, &c., and am sending you by this post the dead queen, a couple of pieces of comb, and two beetles, three of which I found in the midst of the dead bees. 1. What age should you judge the queen to be ? 2. Do you find any trace of disease in the combs ? The only thing I can detect is the odour from the dead. 3. What are the beetles, and would their presence have anything to do with the bees not collecting any honey ? I am positive there was nothing foreign in the hive when I examined it in May. I have kept bees for a number of years, but this lot has beaten me altogether. I may mention that they were much given to fighting last year, but nevertheless did pretty well, giving me about 35 lb. surplus.

My bees, on the whole, have done fairly well, considering the weather. I shall average about 25 lb. per hive, best about 40 lb., this leaving sufficient for wintering. I have had a case of the queen laying in the sections this season, the second time in my experience.—A. T. H., *Whitchurch*.

[It is entirely beyond anyone at a distance, and without personal inspection, to say what has caused the mischief referred to. All we have to judge by is the contents of box sent, and a very sorry mess it is. If a dead queen was enclosed she has been eaten or utterly demolished by the beetles which accompanied her, and to which a great portion of the trouble in the hive may probably be attributed. The "pieces of comb" were also reduced to a foul-smelling mass of filth by the same beetles, so that we cannot help you at all in the matter. The wonder is why such vermin was not cleared out of the hive before the poor bees had been worried out of existence by them.—Eds.]

Queries and Replies.

[1137.] *Dealing with Vicious Bees.*—I know you are always willing to give advice on all matters that perplex us poor bee-keepers, so I beg to ask your advice on the following : Last autumn I bought a queen—a hybrid—paying a high price for her. She turned out all right in plenty of progeny and good

workers. But their tempers, O dear! A nest of hornets would be tame by comparison. They will not bear looking at, let alone handling; and the whole summer they have been a source of trouble. This morning, I and a friend went to prepare for removing surplus chambers in usual way—by lifting them up and allowing bees to escape—but had no sooner removed roof and lifts than out the bees swarmed and started their "innings." They swarmed over us in hundreds; they crawled under our clothes, down into our boots, and stung like—well, like bees only can sting when they make up their minds to! They attacked a man and some chickens fifty or sixty yards away, and fairly routed us from the field. I replaced the roof, &c., as best I could, and then and there registered a vow that when night came their fate should be nothing short of "fire and brimstone"—the effect, no doubt, of some dozen or more stings. But, on second thoughts, I came to the conclusion that *that* was not a very business-like way of going to work, and decided to ask your advice on the following plan, namely, to re-queen again this autumn. But—and here is my difficulty—how to remove the queen and the surplus honey? I could make myself impervious to their stings, but being in a public place, and hundreds of people passing within a few yards of them daily, I am unable to protect them, and did they attack any one, the consequences might be serious.

Could I use chloroform on them, and so render them harmless for a time; remove the surplus and the queen, introduce new one, shaking them all up together, allowing them to come to their senses, and find queen and all going on as usual? Or, instead of chloroform, could I safely use cyanide of potassium? If I used in solution, and soaked cottonwool in it, driving the fumes into hive, would that in any way affect honey in surplus chambers? Can you tell me how chloroform is administered, or is there anything else I could use that would quiet them for a time? If I cannot find any other means, I must go back to my old idea, and destroy the whole colony. But that I am loth to do. Trusting to have your good advice in BEE JOURNAL, to the arrival of which I look forward every week with pleasure.—G. G. LYON, *Hastings.*

REPLY.—We should not think of using chloroform ourselves in such a case; for, with your friend to keep the smoker going, and a little tobacco in the "fuel," it ought to be possible to make the fractious bees amenable to handling, especially if a carbolic spray was brought to bear on them while operating, and the early hours of the morning chosen for the the work before any one was astir. However, it may, perhaps, be best to give the bees a dose of chloroform by putting a few drops on cotton wadding, inserting the latter in a bee-smoker and gently giving a few puffs at the entrance. We have had no experience of chloroforming bees with supers on, so do not quite know how the fumes will affect them in the upper chambers; but they must not be overdosed, or the bees and brood may take permanent harm. On no account use cyanide of potassium. Supposing the queen to be successfully removed, the bees are not likely to again display their vicious tendencies for a time at least, and so it would be well to see them quite recovered and in normal condition before investing in a queen to unite to them. You should always use a super-clearer in taking honey when bees are located close to a thoroughfare.

[1138.] *Mishap to Queen.*—I this year commenced bee-keeping by purchasing three swarms and placing them in frame-hives; two appear to be doing well, but I am in doubt as to cause of bees of the third stock all dying or disappearing. I purchased them through an advertisement. Upon arrival I found them in a small box, which contained comb that was not secured in any way, and was, in consequence, broken down and laying in bottom of box with a great number of dead bees. The remainder I placed in a hive and fed with syrup. They appeared to begin well, drawing out foundation, but have since gradually disappeared, until now there are not more than twenty bees left. I send herewith a frame of the comb for your inspection, and shall be glad if you will let me know through your valuable Journal:—1. Was it because the bees were queenless that they have gone wrong? 2. Is the extending piece in foundation a queen-cell? 3. What is the dark substance in some of the cells? 4. Will it hurt to use the foundation in another hive?—W. W. KIRKMAN, *Chislehurst.*

REPLY.—1. Yes. There is no doubt the queen has met with some mishap, probably in transit, or at time of hiving. 2. Yes, it shows the cell started. 3. Pollen. 4. The combs will be very useful for the purpose named, and may be used with good results.

[1139.] *Returning Second Swarm.*—I commenced bee-keeping last year with a swarm received on June 21, which I placed in a frame-hive. On June 21 of this year they swarmed, and I successfully hived them in a new hive. I immediately put sections on to No. 1, as I wished to prevent casts; but on July 1 a small lot came off, which I returned, securing queen. On July 6 a much larger lot came off, and after removing two combs and replacing with sheets of foundation I returned this lot also, again capturing queen. They did not take to sections, which were very carefully wrapped, but this did not surprise me, as in some cases the farmers cut the clover down before the flowers were in full bloom; but I was sorely disappointed, on examining this lot about the end of July, to find that they were actually dwindling away. I at once came to the conclusion that in removing comb

on July 6 I had destroyed the only remaining queen. On August 4 I noticed the bees in this hive slaughtering the drones, and (having studied three good books on bees) this gave me fresh hope. I fail to find any drones now, but the population is certainly not on the increase. It has been wretched weather here since St. Swithin's, with twenty-six days dull, showery, and cold, and only sixteen days warm and moderately fine. I may add that the majority of the combs are very difficult to remove, as, being a novice, I did not insert full sheets of foundation last year. What do you advise me to do?—NORTHERN, *Durham, August* 27.

REPLY.—Examine combs for normal worker brood, and if none is found, it becomes a question for yourself to decide whether the bees left are numerous enough to be worth re-queening, which we doubt. When returning swarms under such conditions as you describe, it is always best to let the queens run in with the swarm.

[1140.] Some of my stocks of bees, which have given good results during the honey harvest, are now without any stores whatever, having carried all they gathered into the surplus boxes. Will they winter entirely upon syrup, if fed up rapidly at once?—R. T.

REPLY.—Yes.

[1141.] *Wiring "Starters" of Foundation.*—About five weeks ago I drove two stocks of bees (which had swarmed and cast), and placed them each on eight frames with starters of foundation, wired with wire similar to piece enclosed. 1. Will the queen be likely to lay in the cells through which the wire passes, and, if so, will the young bees (or larvæ) die through contact with the wire? Also, would the other bees remove their bodies (if they did die) before they had time to cause disease? 2. The said stocks have only half-built out their combs, and have very little, if any, stores, ought I to feed at once, and if so, rapidly or slowly? 3. Will they winter well with American cloth quilts? 4. Are the enclosed bees queens, and to what race do they belong? Are they pure blacks?—INQUIRER, *Staffs., August* 27.

REPLY.—1. If properly done, the wire should be embedded in and covered with the wax, but there is no need for wiring "starters" at all. The queen or bees will not take kindly to cells having bare wire running through them, but no further harm will result. 2. Feed at once; slowly for ten days, and then rapidly, till sufficient has been stored for winter. Single driven stocks—from hives which had swarmed twice—should have had full sheets of foundation (not "starters") given, and been fed until they had built out the combs. As it is, the bees have been overtaxed with work; and, even if safely wintered, will build superfluous drone-cells next spring in completing the combs. 3. Yes, other things being favourable. 4. Queens of the common or ordinary variety.

Bee Shows to Come.

September 4 and 5.—At Coventry. In connection with the Warwickshire Agricultural Show. Annual show of the Warwickshire B.K.A. Liberal prizes for honey, bees, and appliances. For schedules apply J. N. Bower, hon. sec., Knowle.

September 6. — At Castle-Douglas, N.B. Very liberal special prizes for three 1-lb. jars extracted honey. Entries close September 3. T. Myers, secretary, Castle-Douglas, N.B.

September 12 and 13. — Scottish Bee-Keepers' Association, in connection with the show of the Caledonian Horticultural Society, Waverley Market, Edinburgh. Schedules now ready. John Wishart, assistant secretary, Castlecraig, Dolphinton, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries close September 11. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

JOHN TAYLOR (Altyferin).—*Broaching Sections at Shows.*—Of course a judge has his own opinion as to the necessity or otherwise for breaking into sections at all when judging them, and only in a close competition—or where granulation is suspected—is it usually considered necessary to do so, but to "scoop a large piece from the middle of my best section with a spoon" shows, to say the least, a want of consideration on the judge's part which it is not desirable to see imitated at shows generally.

W. H. C. (Tetsworth).—If combs are affected with foul-brood they should be removed from the hive and destroyed. Spraying them with carbolic acid solution will not cure the stock. All food given to bees in infected stocks should be medicated. It is not worth attempting to cure stocks unless the bees are fairly strong.

BEGINNER (F.W.A.).—*Moving Bees.* — Bees moved so short a distance as one mile at this season would (some of them, at least) return to their old location. The honey in surplus-chambers should, however, be removed as soon as possible, and the bees left where they now stand for a month, or as much longer as convenient, providing that feeding-up could, if needed, be done where

the hive now stands. Carrying on a hand-barrow is the best method of transport.

FELIX BRIDGETT.—Bees sent belong to the genera *Bombus*, one of the common humble-bee species.

FUMIGATOR.—*Bee Food.*—1. The recipe we recommend for making bee-syrup for autumn is that given in Cowan's "Guide Book." 2. For extracting wax from combs nothing excels the "Gerster" wax-extractor, which may be had from any appliance dealer. 3. We can give no information regarding the bees referred to beyond what has already appeared in our pages. 4. Mr. Walton quoted an extract from the American paper simply to show that your plan had already been practised there.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

BEES, Driven from Skeps, 1s. 3d. per lb., with Queen. GILES, Cowsfield Apiary, Salisbury. F 8

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

FOR SALE, 150 lbs. Extracted Pure English HONEY. 7½ lb. on rail. Samples 3d. COLLIER, Nayland, Colchester. F 6

DRIVEN BEES, 1s. 6d. lb., or EXCHANGE for Safety Bicycle or Tricycle. HAYNES, Pillerton, Kineton, Warwick. F 3

CHOICE SELECTED 1894 NATIVE QUEENS, Fertile, 3s. each post free; safe arrival guaranteed. A. J. CARTER, Newfields Apiary, Billingshurst, Sussex. 236

FOR SALE, Healthy DRIVEN BEES, with Queen, 1s. per lb. Package 1s. JOHN DAVIES, Bee-keeper, Newport, Salop. F 2

FOR SALE, a limited number of DRIVEN BEES, headed with 1894 Queens, for delivery in August and September, 1s. 6d. per lb. Orders executed in rotation. C. HAYNES, Hanley Castle, Worcester. E 52

NEW HONEY WANTED, any quantity, clean, well-filled and sealed 1-lb. Sections. State quantity and price for cash. Address, M. CHARLTON, Fruit Merchant, Fawcett-street, Sunderland F 1

HEALTHY 1894 Fertile NATIVE QUEENS, 3s. 6d. each. Four Stocks same strain have this season yielded over 100 lb. each. A. SIMPSON, Mansfield Woodhouse, Notts. F 7

HEALTHY DRIVEN BEES, at 1s. 3d. per lb., and a young Queen; packing-box returned. Choice young Queens at 2s. 6d. each. Address, E. GARNER, Broom, near Biggleswade, Beds. F 4

112 LBS. FINE CLOVER HONEY for SALE, in screw-topped bottles, or in bulk; 1 lb. sample bottle sent post free upon receipt of nine stamps. Deposit. J. KNEWSTUBB, Brackenbar, Appleby, Westmoreland. F 5

GUARANTEED Healthy 1894 FERTILE QUEENS, 3s. 6d. each; safe arrival and introduction. DRIVEN BEES, 1s. 3d. per lb. for 5-lb. lots or over, Queen and Packing included. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. E 89

HEALTHY BEES, guaranteed, with 1894 Queens. 3-frame Nuclei, 8s.; 4-frame, 10s.; 5-frame, 12s. Also Healthy Driven Bees, 1s. 4d. per lb., in 5-lb. lots, with Queen. Apply, J. TREBBLE, Romansleigh, South Molton. E 91

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Prepaid Advertisements *(Continued)*

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LACE PAPER for GLAZING SECTIONS. Three neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

NOTICE.—CARBOLIC TOWEL, and Samples of my BEE-SMOKE CARTRIDGES Free (during Sept.) to all Purchasers of my CARBOLINE POMADE. T. HOLLIDAY.

INDISPENSABLE to HONEY DEALERS.—HARGRAVE'S Folding Cardboard BOXES for 1-lb. Sections. Sample 3d. post free. HARGRAVE, Harrogate-road, Ripon.

MARKET for SECTIONS, EXTRACTED HONEY, and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

CHOICE YOUNG QUEENS, excellent strain, produced by seven years' careful breeding, guaranteed fertile, post free 5s., virgins, 2s. 6d. Rev. C. BRERETON, Pulborough, Sussex. 229

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

SCOTTISH BEE-KEEPERS' ASSOCIATION.

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King's Langley, Herts.

Editorial, Notices, &c.

USEFUL HINTS.

WEATHER.—Excepting for a few very wet, stormy days between the 21st and 26th ult. the weather has continued fine, and bees have been constantly on the wing. This leads us to hope for some good "takes" of heather honey before the close of September; but it has tended to make bees somewhat restless and troublesome in districts where there is no natural forage to keep them employed, because of their tendency to start robbing in warm, sunny weather, with no food obtainable.

FEEDING-UP LIGHT STOCKS AND DRIVEN BEES.—It will, no doubt, have also rendered it difficult to get light-stocks fed-up for winter without robbing being started. Driven lots of bees put on sheets of foundation and requiring to be fed daily are very liable to attack in this way unless great care is taken. Crowds of marauders will sometimes so harass the poor driven bees that they are kept fully employed defending their new home, and they cannot get on at all rapidly with comb-building in consequence. The only thing that can be done to lessen the evil and help the bees is to give warm syrup after nightfall—not more than 1 lb. at a time—remove feeders early next morning, and substituting a cake of soft candy for the syrup during the day-time. Entrances must also be reduced to ½ in. in width, and if the attack is persistently kept up, use cloths damped with carbolic acid on each side of entrance so long as it is continued.

YOUNG QUEENS FOR 1895.—There seems to be quite an abundance of driven bees on sale this autumn at very moderate prices. They may also be had in many districts for a very small cost beyond the trouble of "driving," so that if proper precautions are taken to have only healthy bees, a good deal may be done in the way of ensuring young queens and plenty of bees for such stocks as need them. This is well worth bearing in mind, in view of the importance of having the right material in the shape of young queens and abundance of bees to carry stocks over the winter and start well for next year's campaign.

In uniting a driven lot of bees with queen to a stock requiring strengthening and requeening, remove the old queen the day before, and, when introducing the driven bees, remove the combs temporarily into an empty hive, leaving a couple of frames in the old hive. Throw the driven bees out in front, and as they run in shake the old bees from each frame on to them before replacing the latter in the hive, so that the bees get thoroughly mixed up together. No fighting will take place, and syruping or scenting will be needed.

AN IMPROVED SUPER-CLEARER.—We have not yet reached perfection in super-clearers, at least, so thought Mr. Meadows, of Syston, who has just made another move forward, and introduced an improvement in his "clearer," shown for the first time at Shrewsbury the other day. The new feature will be very helpful—especially to amateurs—in times when bees are troublesome to manipulate, and when the exposure of frames in opening hives is not desirable. By its means the bees can be admitted to surplus chambers from below, and shut off again at the will of the bee-keeper by very simple means. So that after boxes of combs for extracting are first cleared of bees by means of the usual spring escape, the boxes are then removed, the honey extracted, and the box of wet combs replaced on the clearer for cleaning up by the bees, which are admitted at nightfall by simply moving a slide. Next morning the entrance from below is again shut off, and the bees are compelled to pass down through the escape. In this way a single stock may do the cleaning up of several lots of combs with a minimum of disturbance to the apiary, and no exposure at all of bees or risk of stings.

THE DAIRY SHOW

AT THE AGRICULTURAL HALL, LONDON.

The letter of a correspondent on p. 342 of last week's issue, calling attention to the above important show, has aroused a good deal of interest among our readers, and in response to inquiries for further particulars, we give below a summary of the classes for honey, together with the amount of prizes offered for competition. We cannot add much to what was so well said by our correspondent in the letter referred to, beyond expressing our best wishes for the success of the exhibition from the bee-keepers' standpoint, and trusting that the interest in the Dairy Show may cause a good

number of entries to come in from all parts of the kingdom.

The show takes place at a season when "cheap trips" to the metropolis are frequent. There are plenty of attractions besides the "honey," and, moreover, if our honey-producers rise to the occasion, it is not improbable that, as our correspondent says, "customers may be found for future seasons." But no time must be lost in making entries, as list closes on Monday next, the 10th inst.

The following are the prizes in the honey classes :—

HONEY CLASSES.

Twelve 1-lb. Jars. Prizes, 20s., 15s., 10s., and 5s.

Twelve 1-lb. Sections. Prizes, 25s., 15s. 10s., and 5s.

12-lb. Granulated, in jars not over 2 lb. each. Prizes, 20s., 10s., and 5s.

Not less than 1 cwt. Honey, in 7 lb., 14 lb., or 28 lb. tins or commercial packages, for wholesale trade. Prizes, 30s., 20s., and 10s.

Not less than 28 lb., in packages similar to above. Prizes, 20s., 10s., and 5s.

Schedules may be had from the Secretary of the Dairy Farmers' Association, Mr. C. W. Young, 191, Fleet-street, London, E.C.

STAFFORDSHIRE BEE-KEEPERS' ASSOCIATION.

SHOW AT STONE.

This annual exhibition was again held on August 29 and 30, in connection with that of the Staffordshire Agricultural Society, which in this instance celebrated its jubilee. The bee-keepers' display was well worthy of the occasion, consisting of 165 entries, showing splendid quality in all departments, and amounting to nearly one ton in weight, but the tent accommodation was not nearly spacious enough, and the splitting of the exhibits detracted from its effectiveness. This was especially noticeable in the lean-to tent, hurriedly erected at the last moment to accommodate the "Trophy" class. In a suitably large tent the whole display would have produced a splendid effect, of which any association might well be proud. A most pleasing feature was the increase in the number and excellence of the cottagers' exhibits, which were far in advance of previous efforts. The exhibits of live bees were, as usual, a centre of attraction during the show, as were the lectures and demonstrations in the bee-tent.

Much credit is due to the Rev. A. R. Alsop, Mr. Crisp, Mr. Twentyman, and Mr. Cock for their careful staging of the numerous exhibits. The increasing popularity of the Staffordshire Bee-keepers' Show is well seen in the following entries for the past four years :—Leek, 51; Stafford, 66; Lichfield, 136; Stone, 165.

The duties of judging were undertaken by Mr. E. T. Jones, Etwall, Derby, and Mr. John Palmer, Ludlow, Shropshire; and on the second day of the show the latter also conducted an examination of candidates for third-class certificates of proficiency in apiculture.

PRIZE LIST.

HONEY (MEMBERS' CLASSES).

In any form not exceeding 150 *lb.*—1st, W. Williams, Lichfield; 2nd, J. R. Critchlow, Maer Farm, Newcastle; 3rd, Elihu Clowes, Blackbrook, Newcastle; 4th, A. W. Rollins, Stourbridge; 5th, Joseph H. Collier, Stafford; v.h.c., S. B. Fox, Maer; h.c., Harry Wood, Paradise, Lichfield.

Twelve 1-*lb. Sections.*—1st, J. Pellington, Stafford; 2nd, J. R. Critchlow; 3rd, W. Williams; 4th, Elihu Clowes; h.c., Mrs. R. P. Cooper, Shenston Court.

Twelve 1-*lb. Jars Extracted Honey.*—1st, Rev. G. W. Skene, Crewe; 2nd, E. Clowes; 3rd, Thomas Cooper, Newcastle; 4th, George T. Knowles, Burton-on-Trent; v.h.c., J. Pellington; h.c., J. H. Collier; Mrs. Henry Cooper, Eccleshall; S. B. Fox.

Six 1-*lb. Sections.* — 1st, E. Gilman, Ingestre; 2nd, J. R. Critchlow; 3rd, Henry Wilkes, Sandon Hall Gardens.

Design in Comb Honey. — 1st, J. R. Critchlow.

Single 1-*lb. Section and Jar.*—1st, F. Harper, Uttoxeter; 2nd, E. Gilman; 3rd, G. Cheadle, Burston; 4th, J. Pellington; h.c., E. Clowes.

Non-sectional Super.—1st, T. Pearsall, Stafford; 2nd, Miss M. J. Fox, Maer.

Six 1-*lb. Jars Granulated Honey*—1st, F. Harper; 2nd, Harry Wood; 3rd, Miss Woolfe, Madeley.

Twelve 1-*lb. Jars of Dark Honey.*—1st, Henry Wilks; 2nd, Mrs. R. P. Cooper; 3rd, Harry Wood; h.c., F. Harper and S. B. Fox; c., Wm. Stendall, Penkridge.

Three Frames of Comb. — 1st, W. B. Bagnall, Stafford; 2nd, E. Clowes; 3rd, S. B. Fox; v.h.c., H. Wilks.

Six 1-*lb. Sections* (*in Blow's Sections*).—1st, J. R. Critchlow; 2nd, G. Cheadle.

Six 1-*lb. Jars Extracted Honey* (*in Blow's Screw-cap Jars.*—1st, Miss Woolfe; 2nd, T. Cooper; v.h.c., H. Wilks and G. T. Knowles.

OPEN CLASSES.

Twelve 1-*lb Sections.*—1st, J. Stone, Sudbury, Derby; 2nd, Miss S. A. Ward, Hadnall Hall, Shrewsbury.

Twelve 1-*lb. Jars Extracted Honey.*—1st, the Rev. E. Charley, Chester; 2nd, S. Eaton, Audlem, Cheshire; v.h.c., J. Pellington; h.c., Samuel Cartright, Shawbury; F. Harper, Miss Ethel Chester, Melton Mowbray; c., Philip H. Rawson, W. G. Bagnall, Rev. G. W. Skene.

LABOURERS' CLASSES.

Comb Honey. — 1st, G. Cheadle; 2nd, Richard Middleton, Stafford; 3rd, G. Woodward, Admaston.

Extracted Honey.—1st, G. Cheadle; 2nd, R. Heathcote, Blithfield; 3rd, G. Woodward; h.c., R. Middleton.

Beeswax.—1st, S. P. Fox; 2nd, J. R. Critchlow; 3rd, E. Clowes; h.c., F. Harper.

Observatory Hive, with Bees.—1st, E. E. Crisp, Stafford; 2nd, A. W. Rollins; 3rd, W. Williams.

Collection of Appliances.—1st, Charles Redshaw, South Wigston, Leicester; 2nd, Thomas Walmesley, jun., Lichfield.

WOTTON-UNDER-EDGE B.K.A.

The annual show of the Wotton-under-Edge B.K.A. was held in connection with the annual fête on Saturday, July 21. About 800 lb. of honey was staged, and the whole display looked very well, and did the exhibitors great credit. Some extracted honey of excellent quality was staged, and the competition in this class was very keen. Entries for sections were fewer, no doubt owing to the fact that the demand for comb honey in the district is smaller, and in consequence they do not pay so well for producing. The judging was performed by Mr. E. J. Burtt, of Gloucester, whose awards were as follows :—

Honey in any Form.—1st, W. Griffin; 2nd, G. Gunston; 3rd, J. Rudge.

Twenty-four 1-lb. Sections.—1st, A. H. Chanter; 2nd, Mrs. Till; 3rd, General Burn.

Twenty-four 1-lb. Jars of Extracted Honey.—1st, W. Hulance; 2nd, C. W. Workman; 3rd, F. Tilley.

Twelve 1-lb. Sections.—1st, W. Hulance; 2nd, A. H. Chanter; 3rd, J. Lovell.

Twelve 1-lb. Jars of Extracted Honey.—1st, Mrs. Till; 2nd, W. Hulance; 3rd, A. J. Brown.

Honey in any Form, not over 50 lb.—1st, C. Workman; 2nd, G. Griffin.

Beeswax.—1st, W. Griffin; 2nd, G. Gunston; 3rd, Mrs. Till.

Wasps' Nest.—1st, A. J. Brown; 2nd, G. Parker.

Collection of Bee Flowers.—1st, A. J. Brown; 2nd, G. Griffin.

HONEY SHOW AT DUNFERMLINE.

This show was held at Dunfermline, in the East End Park, in connection with the Dunfermline and West of Fife Horticultural Society, on Friday and Saturday, August 31 and September 1. The committee had four classes for honey to be competed for by members, and all the classes were fairly well filled. The honey exhibited was all of good quality. Mr. Dawson had a good display of bee-appliances, and Mr. J. L. Broadfoot, Edinburgh, acted as judge.

AWARDS.

Six 1-lb. Sections.—1st, G. Philp, Midfield; 2nd, Wm. Reid, Carnock.

Six 1-lb. Jars Extracted Honey.—1st, T. Brown, Baldridgeburn; 2nd, Wm. Reid.

Two Shallow-Frames Honey.—1st, G. Weston, Grantsbank; 2nd, Wm. Reid.

Exhibit (any sort, Bees or Honey).—1st (silver medal), Wm. Reid; 2nd, G. Weston.—(*Communicated.*)

DARNAWAY MOYNESS AND DISTRICT B.K.A.

The annual show of the above association was held in connection with the Dyke Horticultural Society's Show on Brodie Castle grounds on August 1. Considering the very unfavourable weather for honey gathering in this district, it was a very good show. Mr. G. McLean judged the honey and Mr. W. Archibald the hives and appliances, and made the following awards :—

Straw Super.—1st, D. McDonald, Whitemire.

Crate of Honey.—1st, A. McKenzie, Auldearn.

Six 1-lb. Sections.—1st, A. McKenzie.

Three 1-lb. Jars Run Honey.—1st, A. McKenzie; 2nd, W. McDonald; 3rd, J. Donaldson.

Three 1-lb. Jars Heather Honey.—1st, C. Johnstone; 2nd, D. Fraser; 3rd, A. McKenzie.

Three 1-lb. Jars Granulated Honey.—1st, D. McDonald; 2nd, W. McDonald; 3rd, C. Johnstone.

Frame of Honey in Comb.—1st, A. McKenzie; 2nd, Jno. Donaldson.

1-lb. Cake of Wax.—1st, A. McKenzie; 2nd, C. Johnstone; 3rd, Mrs. McKenzie, Whitemire.

Collection of Appliances.—1st, J. Donaldson.

Collection Made by Exhibitor.—1st, J. Donaldson; 2nd, A. George.

Observatory Hive with Bees.—1st, J. Donaldson.

Glass Super of Honey.—1st, A. McKenzie; 2nd, Mr. Brown, Berrylea.

One *1-lb. Section.*—1st, W. McDonald; 2nd, W. McDonald; 3rd, D. McDonald.

Two 2-lb. Sections.—1st and 2nd, C. Johnstone; 3rd, W. Brown.

Two medals were also given for the highest number of points. Mr. McKenzie won one, Mr. J. Donaldson the other.—(*Communicated.*)

SHOW AT KNIGHTON, RADNORSHIRE.

The committee of the Knighton Horticultural Society encouraged the bee-keeping interest in their locality by inserting three classes for honey in the schedule of their exhibition held at Knighton on August 31. The entries were not numerous, but were all of first-class quality, not a second-rate exhibit being staged in any class. The extracted honey shown was of uniformly fine colour and

great density. Sections were exceptionally fine and well filled for the season. The staging was effectively carried out by Mr. A. Hamer, Llanarthney, and Mr. John Palmer, of Ludlow, acted as judge :—

PRIZE LIST.

Six 1-lb. Jars Extracted Honey (open).—1st, B. G. Brocklehurst, Ludlow ; 2nd, Geo. Bullock, Craven Arms ; v.h.c., Mr. J. Dewhurst, Pamprenton ; h.c., Mr. T. Pritchard, Weymore.

Six 1-lb. Sections (open).—1st, T. Lloyd, Cilmery, Radnor ; 2nd, Phil. Jones, Church Stretton.

Best Exhibit of Honey.—1st, B. G. Brocklehurst.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

BEE-KEEPING AS AN OCCUPATION.

[2060.] Trusting that I am not imposing too much on your generosity by asking the following questions, I should like the opinion of some one more experienced than myself before coming to a decision, under the following circumstances :—I am a young man with a situation (indoor work, partly writing), which the doctor tells me is very injurious to my health, although I am sound. He therefore advises me to leave it, and obtain a situation where I shall be more in the open air. My present salary is £57 per annum.

I know of no occupation I am capable of following out in the open air except that of bee-keeping. This I already understand fairly well, having kept bees in bar-frame hives for eleven years, and I have also recently obtained a "first-class" (advanced stage) in scientific agriculture, taking bee management as one of the questions. My house is very well situated, with ample accommodation for carrying on a large apiary, and the district is considered a very good one for honey, as the fields are all pasture—soil, clay loam—and are white with clover bloom in season ; lime, Spanish nut, and blackberry are also plentiful ; and just one mile away is Cannock Chase, where the bees obtain sufficient heather honey to carry them through the winter, after taking the whole of the other honey from them. I think there are not more than thirty hives kept within five miles from me any way, about fifteen half a mile to the north, fifteen half a mile to the south, and east and west *nil*. I could stock an apiary with 150 hives, and still then have £100 left to fall upon in case of bad season, &c.

I calculate that 150 hives will average 30 lb of honey per hive each year, which, if sold at 5d. per lb., would bring in a yearly income of £93. 15s., and, allowing £23. 15s. for expenses, paint, &c, I should have £70 per annum, an increase of £13 on my present salary, and better health. I am also an experienced poultry-keeper, and could fill my spare time in the winter at other things.

I have taken 30 lb. as an average for good seasons and bad, and 5d. per lb. for honey, as I consider this the lowest it is likely to fall to. I obtain now 10d. per lb. retail, and 8d. wholesale, and often take over 60 lb. from a hive, and I have no winter or spring feeding. I have also omitted to allow for swarms I might sell. I think you will now understand what I require, and shall be very pleased if you will kindly give me your opinion in the BRITISH BEE JOURNAL on the following questions :—

1. Are 150 hives too many to keep together in one apiary? Are there any apiaries so large as this? 2. I have now eleven hives. Could I increase these to thirty next season, sixty the following season, 100 the following, and 150 the next, with a certainty of obtaining a little honey to cover working expenses? 3. Do you think 30 lb. per hive a fair average, and is the price of honey likely to fall below 5d. per lb. ? 4. Could one man manage 150 hives in the season? 5. Do you think it likely, "after allowing for working expenses," that the average income from 150 hives would fall below £50 per annum?—SIMPLETON, *Staffs, August* 28.

[Before giving our opinion on the questions enumerated above, we deem it necessary to say that our uniform rule is to endeavour to dissuade persons from engaging in the occupation of bee-keeping in this country as a *sole* means of obtaining a livelihood. From this rule it is not our intention to depart. There is, however, in the details furnished by our correspondent much to cause us to think favourably of the position as presented above. In the first place, he is giving up present employment from necessity, not choice. Second, he possesses the great advantage of eleven years' experience as a bee-keeper, and a full knowledge of the locality in which he resides as a honey district. Third, the prospective average is based on what he has already secured in the past, and the price of his produce is fixed at a much lower rate than he obtains at present. Fourth, he understands poultry-keeping and proposes to add it to the business, besides "filling up spare time in winter at other things." Fifth, the income expected is a modest one, and he possesses sufficient capital to enable him to secure "best terms" for all he requires, and would thus start under the most favourable conditions.

All this tends to clear the way for a plain reply to the several questions put, which we answer as follows :—1. Yes, 150 stocks would be better and *safer* if divided into fifties and located two or three miles apart for several reasons, but mainly in case of disease breaking

out. We do not know of any one in this country who keeps so many as 150 hives, though several have over 100. 2. So much would depend on season for queen-rearing and *safely* dividing for increase at the rate proposed that we could promise no "certainty" in the matter. Besides, in the case of making a business of bee-keeping it would be best to start with more than eleven stocks. 3. Yes, 30 lb. per hive is not at all an extravagant average to count on, and for *good honey* 5d. is a very low price, especially when considering that a portion would be sold retail. 4. No. In the busy season some help would be required, particularly in the way of having a handy person to watch for and hive swarms at out-apiaries. 5. As we have said, the prospects of realising £50 per annum under the circumstances detailed above are, in our opinion, quite likely of fulfilment, but in the whole business it depends as much upon the capacity and aptitude of the individual as upon anything else for making it pay.—EDS.]

A BEE-KEEPER'S HOLIDAY.

[2061.] Your correspondent whose letters on queen-culture are so appreciated in your pages (if you please we will call him the "Thornton Heath-un") has been devoting a great part of his holiday to going in and out among the hives in parts of Kent and Surrey, rendering bee-keepers a good deal of help. Not a few are the stocks he has driven that were condemned to the sulphur-pit. He has also had confirmation of our bad honey season in Kent, for most of the skep-comb was almost bare of stores, and some of this year's swarms actually starved already. I can see that practice in queen culture gives a very special aptitude in "driving" and manipulating bees. Our friend (and his young son, too) could almost invariably "spot" the queen at once, and what is worth observing is that queen-rearing begets an excessive care in manipulating lest "mother" should be injured or fall, and not find her way home. In one particular instance I "took it for granted" the queen was safe, although unseen; but carefulness dictated a final search, and our friend at the last moment found her on the ground. Several days (with intervals for disinfection of clothing) were devoted to tracing an outbreak of foul-brood not very far from Swanley. We examined every skep—as far as that is possible—but at length discovered an affected frame-hive 300 yards northward in a "bee line" with an old centre of disease, a mile and a half away. Both stocks were destroyed. Cottagers have no time for "curing experiments," and healthy stocks are endangered. On a subsequent journey in same district we found three skeps—which had been brought from the old centre referred to—moved half a mile further out, so that in two directions in this particular locality the radius of mischief had extended itself outward since last autumn. Thus the disease advances, and, but for our friend's help, it would probably have remained undiscovered. The need in every county is a conscientious, painstaking expert constantly "on the go" for eight months out of twelve. Alas, this is "a big order," but our Associations must fill it or fail in a duty. We found many readers of the B.B.J. and *Record*, and, unfortunately, one or two who made light of "F.B." To such, in a general way of speaking, probably much of the existing mischief is due. "Braula cœca" (the parasite known as blind louse) prevailed in many stocks, workers usually indulging in but one of these red-coated parasites. Some queens had five. One had five of quite a faint colour. This parasitic preference for "royalty" is probably due to broader opportunities and court fare, but these uncanny insects have too many human counterparts.

Our friend was unable to join us in a driving expedition at Lenham. Lenham is half way between Maidstone and Ashford. The village has some picturesque points and architecture of other days, making the spot well worth a visit. Mr. William Smith, who has a patch in his garden literally crammed with skeps, gave us much information and some capital stocks to drive. We could have had a score from the neighbourhood, but, for want of time, we had to be content with saving ten lots from sulphuring. Lenham district abounds in skeps, and would make a capital location for some modern hives.—KENT BEE-KEEPER, *Sept. 1st.*

AMONG THE BEES.

QUILTS VERSUS WOOD-COVERS OVER THE BEES.

[2062.] Now I am not going to advocate the use of honey boards or wood covers instead of quilts, but, in an American bee journal I read the following, penned by one who, we may rely upon it, knows what he is writing about: "The chief reason why cloths are used at all is because the bee-spaces are too large, and the old-fashioned thin top-bars" (these are the bars now in use in Britain) "render them almost a necessity. With thick top-bars and proper bee-spaces over the sections, a cloth or quilt is *worse than useless*" (the italics are mine). One cannot but agree that the last sentence savours a little of dogmatism. By the foregoing, according to the writer, we are, by using quilts, doing that which is an almost imperative necessity in this country, where thin top-bars and spaces under the sections are in vogue.

In a large apiary the expense of quilts forms a rather serious item. They get gnawed, not only by the bees, but by the larvæ of moths, &c., and, to say the least, at most times look very untidy. Now, a honey-board or wood covering to the frames or sections means a large outlay at first, but they are compara-

tively indestructible, the first expense being the only one. I have had some experience of wood coverings to the frames, as many years ago a maker—I don't know who it was—fashioned his hives with wood coverings over the frames; indeed, a well-known London maker of bee-appliances has made, and may perhaps make at the present day, a frame hive having in place of quilts a wood frame filled in with straw, fashioned in the manner of the straw of a skep. To be concise, I don't like the wood covering or the straw. But a few weeks ago I had to remove both the wood and straw coverings or honey-boards from off several hives, and, to say the least—the honey flow having ceased at the time—it was a trifle lively for a few seconds; I rather wished the boards in another part of her Majesty's dominions. I thought what a pleasure in comparison it was to quietly peel off an enamel quilt and subjugate the bees while so doing. As no doubt many of my readers are aware, I have not used a smoker for quite nine years, and now I have even given up using a fumigator, finding another and simpler method of subjugation superior to either. As these means adapt themselves just nicely to quilts, I, for one, should not like to see the honey-board or wood covering take their place, though if found superior either for the apiarist or the bees to quilts, I could no doubt find a method of subjugation applicable to these.

I take it that all the American honey-boards have a bee-space on the under side—I have, or rather had, a Heddon hive with such a space provided in the flat roof—so they do not become affixed very firmly to the frame tops as the English honey-board does. This latter is one of the principal reasons for my dislike to them, as, when prising them up, they are certain to lift one or more frames with them. Now, usually one or more of these frames break away when the board has been lifted an inch or so, and, falling back into their places with quite a loud bump, cause a commotion in the hive, which takes a lot of subjugation to subdue; in fact, the bees are never after, during that manipulation, in a very "kind" condition. I have noticed this to frequently take place when lifting off a rack of sections, so always make it a rule to push back all the frames, when a rack is being removed, by inserting a chisel or screw-driver down the sides of the super for that purpose. The honey-board or cover would not adapt itself to our supers as with the American hives, their section-racks being formed by the sides of the lift proper, and are not in the majority of cases a separate appliance as with us. Wood covers to suit our frames and racks could easily be made, but here steps in a difficulty. We should require two to each hive, one for the frames and one for the rack. I am rather of opinion that bees would winter very much better with wood covers, well cleated together, and a bee space on the under side. I shall make several of these this autumn, and winter a few stocks with them. I don't exactly "catch on" to all the American plans. I once wintered two stocks in a "clamp" with exceedingly gratifying results when removed in early spring, but they directly after dwindled to absolutely nothing; hence, with the results of other experiments I have made, I have come to the conclusion that what will suit American bee-keeping will not always suit British, and no doubt *vice versâ*.—W. B. Webster, *Binfield, Berks.*

PROPOLISING "WELLS" DUMMIES.

[2063.] I notice that from time to time your correspondents "complain" of bees not clustering on the dummy of a hive worked on Mr. Wells' method. This in all probability is due to the entrances being in opposite ends of the hives instead of side by side. When the former is the case the bees naturally elect to cluster near the entrance, and if both stocks are weak the dummy will not be included in the cluster. With regard to propolisation of the holes I find it is a question of *race*. Carniolans will propolise in large quantities, whilst with Italians the holes are never filled up. As a trifling token of the great amount of help I have gained from your columns I beg to forward you one of my feeders, illustrating how convenient I have found ordinary draught-tubing for close-fitting dummies, &c., without jar in manipulation.—Clement Coke, *Longford, Derby, August* 29.

[Many thanks for dummy feeder. We have found it quite useful just now in feeding-up driven bees troubled by robbers. By giving a half-pint of syrup in the tin case each night, and a cake of soft candy in the other portion of dummy, we have had the syrup taken during the night, and the candy keeps the bees "going" all along, without the temptation to robbing afforded by syrup-feeding during the daytime.—Eds.]

A CORRECTION.

[2064.] In B.J. of August 16 (p. 330), in reply to J. C. Barnlett (Penzance), you refer to Mr. Meadows, of Syston, as the only maker who manufactures the "Wells" hive on the "W. B. C." plan. Now, as a matter of fact, my "Wells" hives have always been made on this plan, and I was the only one who originally made them so, and I have advertised them as such for the past two years.

On introducing the hive to public notice I called it the "W. B. C. Wells hive," but at your own request I dropped the "W. B. C.," and now call the hive the "Wells," but you will see by the enclosed printed description that it is made the same as it originally was, *i.e.*, on the "W. B. C." plan throughout. I should be glad if you would, in justice to me, kindly call attention to these facts in next

issue of the B B.J.—CHARLES REDSHAW, *South Wigston.*

[The information furnished on p. 330 was the result of a search among all the dealers' catalogues we had by us, Mr. Redshaw's, unfortunately, not among them, while the fact he has referred to had entirely passed from our memory. We do, however, now remember it, and gladly publish the above correction. —EDS.]

CURING FOUL BROOD.

[2065.] With your permission I should like to give my experience of curing foul brood by the "McEvoy" system, or a modification of it, as I gave clean hives each time, as I see your correspondent, "M. K." (2054, p. 334), in last week's issue, is complaining of want of success, I had a "Wells" hive formed last autumn by a stock in one end and some driven bees in the other. The driven bees came to hand in very bad condition, more than half being dead, through being sent in too small boxes, and improper ventilation. However, they worked well, and came through the winter, but not strong. By-and-by I discovered that both lots had foul brood badly, smelling very strong and hundreds of rotting grubs in the cells. Sometime (I believe early in June) I decided to give the McEvoy system a trial. I put both lots together in a clean hive on "starters," and the two lots combined only made a weak lot. I allowed them to work four days and again removed them, putting them back in their old hive on full sheets of foundation, thoroughly cleaning the hive, and giving it a coat inside and out of "Blundell's petrifying liquid," which seems to me to be a mixture of shellac and naphtha. I fed them on syrup medicated with "naphthol beta," as the weather was wet. They did splendidly, having slabs of brood in a few weeks, with not a single dead grub. They threw me a fair swarm the first week in August, which I hived and put in the other end of parent hive, and they have now a splendid lot of brood, clean and healthy. And on examining the old stock for queen the other day, I could not see a single cell that the bees had not hatched out of. Of course, with such a summer, they have yielded no surplus. But at the expense of a few shillings for sugar and a little trouble I have now my "Wells" hive stocked with healthy bees. I may say I burnt the frames and combs as a matter of course, and am quite satisfied with the method adopted.

Speaking of "Wells" hives, will you just allow me to say how I make a cheap and efficient "Wells" dummy. I get a length of board used for picture-frame backing, 5 ft. by 11 in. for 3d.; glue it together, one piece lengthways the other cross, clean it off with a plane, and get a harness-maker's punch and punch holes in it, as many and as fast as you like. Take then a top-bar of a frame, or similar piece of wood; insert the wood into slot, and glue it. Cut to exact size, and if you like, bind ends with tin; but being made with the wood crossed, there is not much fear of warping, and the thickness is under ¼ in. Were it not that the wood is rather knotty, one could make two for the 3d.—G. C. LYON, *Hastings, August* 27.

[The above is very satisfactory; the only point not quite clear being whether the bees were really affected with foul brood or not. Mistakes are so frequently made by correspondents who send samples of what they suppose to be foul broody comb to us for inspection—basing their opinion on the very offensive smell which "chilled brood" has after being dead in the cells for some days—that we are compelled to make this reservation in the interest of all.—EDS.]

A NOVICE'S REPORT.

[2066.] In reading the report of the South of Scotland Bee-keepers' Association's show at Dumfries in BEE JOURNAL of August 23 *re* the "Designs in Honey-comb." I am a novice in bee-keeping, and will be glad to have some information as to what it is meant by it, and how it is done?

I began bee-keeping in 1892 by taking a skep of bees that had been condemned to the sulphur-pit. I had never seen bees driven or a swarm hived, but always had a mind to keep bees, but never could manage to raise funds to purchase a swarm. A friend, however, lent me a "Guide Book," I studied it, and with its help I constructed a hive, and after buying some empty combs, a cottager offered me some bees that he was about to burn. So for the first time I tried my hand at bee-driving according to instructions in the "Guide Book," and I was successful. I put them on nine frames, took them home, and gave them 28-lb. of syrup. They wintered well, and came out strong in spring, and last year I took from my hive sixty-three well-filled sections. Encouraged by my success, I increased my apiary this year to four hives; three from driven bees and one (a double swarm from two skeps which joined of themselves) was put in box; last week I drove the bees out and united them to a frame-hive. The honey I obtained from that box weighed 11 lb.—rather a contrast from 1893. In fact, all my four stocks this year will not yield more than one-half of what the single hive did in 1893. Not very encouraging, is it? But what can't be cured must be endured, and we must hope for a better harvest next year. I fear skeppists will fare badly this year, for I lately felt the weight of some swarmed skeps, and I am sure the skeps, honey, bees, and all did not weigh more than 7 or 8 lb.—ENTHUSIAST, *Suffolk.*

[Particulars of how to make "honey-comb designs" appeared in our monthly, the *Record*, which will be sent for 2½d. in stamps.—EDS.]

METEOROLOGICAL SUMMARY.

AUGUST, 1894.

Locality, Stoke Prior, Worcestershire.
Height above sea-level, 225 ft.
Rainfall, 2·26 in.; heaviest fall, 0·33 in. on 9th.
Rain fell on nineteen days.
Max. shade temp., 72° on 30th.
Min. temp., 36° on 20th.
Max. shade temp. at 9 a.m., 64° on 13th.
Min. temp. at 9 a.m, 52° on 23rd and 29th.
Frosty nights, nil.
Max. barometer, 30·2° on 30th.
Min. barometer, 29·3 on 15th.

Weather very showery and cold for the first three weeks; afterwards very fine indeed, giving one a good chance to prepare stocks for wintering. A few wasps seen about the hives. Bees inclined to be very vicious, similar to what they were in 1892. Fighting also prevalent between those even of the same community. A high barometer at close of month, but slightly falling. Some heavy dews and foggy mornings.

PERCY LEIGH.

WEATHER REPORT FOR AUGUST, 1894.

WESTBOURNE, Sussex.

Rainfall, 2·14 in.	Sunless Days, 1.
Heaviest fall, 0·38 in. on 24th.	Below average, 36·5 hrs.
Rain fell on 17 days.	Mn. Maximum, 63·6°.
Above average, 0·28 in.	Mn. Minimum, 52·7°.
Max. Temperature, 70° on 31st.	Mean Temperature, 58·2°.
Min. Temperature, 41° on 21st.	Maximum Barometer, 30·49° on 30th.
Sunshine, 162·5 hours.	Minimum Barometer, 29·76° on 15th.
Brightest Day, 13th, 11·3 hours.	

L. B. BIRKETT.

Queries and Replies.

[1142.] *Width of Edging for Section.*—1. I should be greatly obliged if you would kindly inform me what width of edging to the glazed case is permissible when exhibiting sections? or rather what amount of comb area must be visible? 2. I discovered a few days ago that one of my queens (she was hatched last year and swarmed this summer) had evidently ceased laying for over three weeks, and had just begun laying again. Does the result of your experience tend to show that it would be advisable to destroy her and give the stock another queen?—CLEMENT COKE, *Longford, Derby, August* 29.

REPLY.—1. When width of edging is restricted at shows it is usually limited to ⅜ in. round the whole face of section, but it is well to confine the covering-up to this extent even when no restriction is imposed, as no competent judge is deceived by hiding faults in this way. 2. We should rather suspect the queen's productive powers to be failing if breeding ceased for so long a time at end of July, and would *re*-queen, if convenient.

[1143.] *Dealing with a Single Cell of Foul Brood.*—1. Please tell me to what variety the enclosed bees belong. 2. In one of my frame-hives I have found *one* cell, the contents of which answers only too well to the description of foul brood. There is a good patch of apparently healthy brood on the same and other combs, and I have cut the bad cell out. Kindly tell me what to do for this hive, and to preserve the others from infection. Also, will section rack, &c., just removed, be infected?—SOO, *Sussex, Aug.* 29.

REPLY.—1. Hybrid Carniolan. 2. Watch how the remaining sealed brood comes on, and if it hatches out all right, feeding for winter with medicated food, together with keeping up supply of naphthaline in all hives, may stop further mischief. If, however, more brood is found dead, the bees should be got off the combs, and compelled to build new ones from sheets of foundation. 3. If washed in hot soda and-water the rack may be used again.

[1144.] *Bees'-wax for Showing.*—1. Could you give me the necessary information regarding the preparing of the bees'-wax for show purposes? also to keep it from cracking while cooling? 2. Is there any particular way of keeping it yellow? I find some of it has become quite white.—ANDREW BON, *Monmouth, August* 30.

REPLY.—1. Only the finest wax should be selected, extracted from combs in which no brood has been reared, or from the cappings of such combs. Boil and ladle off the clear wax as it rises to the surface into a vessel of hot water. When the latter is cold the wax is lifted off in a cake, and, after scraping from the underside any discoloured matter, re-melt in clean water, skimming it off as before. Cooling very gradually keeps it from cracking. 2. The colour should not change if the wax is kept in the dark.

[1145.] *Uniting Swarms.*—I began bee-keeping this year, having bought two stocks in bar-frame hives in April. Both swarmed, and one threw off a side-swarm, and I united the three swarms in one hive, allowing them to choose their own queen. This I did about the middle of June. I gave them ten frames, with only half-sheets of foundation, and fed them slowly with bottle-feeder up to last week. On examining them yesterday (29th) I found no brood in the four centre frames (the ones taken out and examined), but there were several queen-cells, a good deal of pollen, and some drone bees. Is the hive likely to be queenless? and, under the circumstances

(there are still plenty of bees), what would you advise me to do?—DANIEL MANDERSON, *The Manse, Minterburn, August* 30.

REPLY.—The stock is evidently queenless, and if a young fertile queen or—better still—if a second swarm could be had for a small sum beyound the trouble of driving, it would be worth the cost to start the bees again.

[1146.] *Re-starting Bee-keeping.* — Having been out of the bee-world for a year or two, I am not *au courant*, and should be glad to know (1) if the practice of placing a lift or "eke" under body of lower hive for winter is still thought good? and (2) if dummy is still used? Also (3) in feeding up do you reckon weight of sugar given or weight of syrup?—"GIL BLAS," *Wakefield, September* 1.

REPLY.—1. Yes, to give space below frames in winter is considered as advantageous as when first advocated. 2. Yes. 3. Weight of syrup.

Echoes from the Hives.

Sandford St. Martin, Oxon, August 25.—It has not been a bad season here for those who fed their bees during the spell of cold weather in June. To those who did not, either the season or else themselves has been a failure. I had seventeen colonies, spring count; increased them to twenty-five, and sold two swarms. I have taken from them twenty-three dozen 1-lb. sections and 2 cwt. of extracted honey, so I don't consider the season has been a bad one for me.—EDWD. HANCOX.

Beauly, N.B., August 31.—As regards the honey season this has been the worst on record as far as my experience goes. Weather continually wet and very little sunshine; consequently the heather is very bad, and it begins to get too cold for bees to do much work. I have only taken 40 lb. of honey off three hives.—JAMES SHAW.

Honey Cott, Weston, Leamington, Sept. 1.—The season here has closed, and I have got a fair amount of extracted honey, having had a good number of ready-worked-out combs, both shallow and standard size. In working for extracted honey this season the bees put most of it in the upper stories, so that they will have to be fed pretty liberally to carry them through the winter, while those stocks that were worked for sections seem to have looked after themselves by keeping some down below. I do not think I have above a quarter crop of comb honey, but still enough to make one thankful, considering that at midsummer the bees were nearly starving and had to be fed. Being at Winchester the week before last, myself and wife paid a visit to friend Wm. Woodley and his wife, which we enjoyed very much, though our friend had a bad cold. Hope he is better now. I went with a friend and drove some bees about two or three miles from Winchester. The skeps seemed to be about same weight as several I have driven in our own neighbourhood, a few being rather better than the average. Friend Martin, of High Wycombe, writes me about one of his stocks swarming in extraordinary fashion. He says:—"It swarmed and 'casted' by May 14, and the swarm swarmed and casted, then the cast from the old stock swarmed, and the old stock swarmed and casted again in July. I never knew a cast swarm before, and the old stock swarmed and casted twice in one year." Surely they must have been an unusually prolific breed of queens. We are having some nice weather now, so that it offers a good chance to get the bees in order for winter. There is nothing round here from which the bees can now get anything in shape of food, so they are on the look out to get some by stealth if they can manage it. Wasps, too, are getting rather troublesome.—JOHN WALTON.

Bee Shows to Come.

September 12 and 13. — Scottish Bee-Keepers' Association, in connection with the show of the Caledonian Horticultural Society, Waverley Market, Edinburgh. Schedules now ready. John Wishart, assistant secretary, Castlecraig, Dolphinton, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries close September 11. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

October 9 to 12.—Dairy Show at the Agricultural Hall, London. Five classes for honey. Liberal prizes. Apply for schedules to Wm. C. Young, Secretary, Dairy Farmers' Association, 191, Fleet-street, London, E.C. Entries close September 10.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

JOHN C. WALTHEN.—*Cleaning Wax Extractor*—We know of no better method of cleaning than boiling and wiping off any wax adhering to sides while hot. A wax extractor after using a few times becomes very unsuitable for use as a strainer for cappings or for storing honey in.

B. BAYLEY, JUN.—Bee received is a very fair specimen of the Carniolan variety.

W. WILLIAMS (Lichfield).—*Wax Extracting.*—Notwithstanding the non-appearance of the article referred to, we thought there had appeared in our pages so many replies to

queries on wax-extracting (similar to that addressed to Andrew Bon on page 358), to say nothing of descriptions of home-made extractors and others used by correspondents, as to enable any one to do it well. We also printed from the *American Bee Journal* a long article on "Cleansing and Purifying Wax," written by "the largest comb-foundation makers in the world," Chas. Dadant & Son, of the U.S.A., which should have enlightened our readers pretty well on the subject.

J. C. (Wolverhampton).—*Mesh of Wire for Extractor.*—Ordinary woven wire (tinned) of about ¼-in. mesh is used for cages.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

BEES, Driven from Skeps, 1s. 3d. per lb., with Queen. GILES, Cowsfield Apiary, Salisbury. F 8

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

EXCHANGE pair of handsome GAME BANTAMS for Driven Bees.—H. CRAWLEY, 250, Canbury Park-road, Kingston-on-Thames. F 16

EXTRACTED ENGLISH HONEY in ¼ CWTS, 8d. per lb., tins free. Sample, 2d. deposit. RICHARD DUTTON, Terling, Witham, Essex. F 12

DRIVEN BEES at 1s. 3d. lb. Young queen. Package free and on rail. Cash with order. R. BROWN, Flora Apiary, Somersham, Hunts. F 11

CHOICE SELECTED 1894 NATIVE QUEENS, Fertile, 3s. each post free; safe arrival guaranteed. A. J. CARTER, Newfields Apiary, Billingshurst, Sussex. 236

HEALTHY DRIVEN BEES, 1s. 3d. per lb.; in 5-lb. lots. Boxes to be returned. E. LONG, Cottingham, Cambs. E 70

WANTED, SECTIONS of HONEYCOMB (first quality). Prompt cash; packages sent. Any quantity. E. HURST, Bexhill, Sussex. 235

LACE PAPER for GLAZING SECTIONS. Three neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

WANTED, NEW EXTRACTOR in EXCHANGE for Clover Honey in shallow frames. WALLACE, Beekeeper, Cheadle, Hulme, Cheshire. F 10

NEW HONEY WANTED, Sections and Extracted, in bulk. State price and quantity. HONEY PRODUCERS' AGENCY, 17, White Lion-street, Islington, London. F 13

FERTILE QUEENS, bred by selection, 5s. Very prolific. Ordinary Fertile Queens, 3s. 6d. Post free. Safe arrival guaranteed. Rev. C. BRERETON, Pulborough, Sussex.

FOR SALE, 4½ CWT. pure ENGLISH HONEY at 6d. per lb. Payment by deposit system. Address, C. M. EAGLETON, The Apiary, Parson Drove, Wisbech. F 9

FINE-TESTED 1894 FERTILE QUEENS, 3s. 6d. each. Safe arrival guaranteed. 3-frame nuclei, 10s. 6d. Packing included. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. F 15

Prepaid Advertisements *(Continued)*

NEW HONEY WANTED, any quantity, clean, well-filled and sealed 1-lb. Sections. State quantity and price for cash. Address, M. CHARLTON, Fruit Merchant, Fawcett-street, Sunderland. F 1

HEALTHY 1894 Fertile NATIVE QUEENS, 3s. 6d. each. Four Stocks same strain have this season yielded over 100 lb. each. A. SIMPSON, Mansfield Woodhouse, Notts. F 7

HEALTHY DRIVEN BEES, at 1s. 3d. per lb., and a young Queen; packing-box returned. Choice young Queens at 2s. 6d. each. Address, E. GARNER, Broom, near Biggleswade, Beds. F 4

NOTICE.—CARBOLIC TOWEL, and Samples of my BEE-SMOKE CARTRIDGES Free (during Sept) to all Purchasers of my CARBOLINE POMADE. T. HOLLIDAY.

INDISPENSABLE to HONEY DEALERS. — HARGRAVE'S Folding Cardboard BOXES for 1-lb. Sections. Sample 3d. post free. HARGRAVE, Harrogate-road, Ripon.

MARKET for SECTIONS, EXTRACTED HONEY, and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

WANTED, WELLS HIVE, complete, second-hand or shop-soiled; also Stock of Italian or Carniolan Bees, cheap for cash; or Exchange Black Minorca Cockerels and Pullets, own brothers and sisters to 1st and special winners. JOHN BARKER, Winton, Kirkby Stephen. F 14

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

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GOOD PINE PLANKS.

Largest Stock in London.

VERY DRY, SOUND, CHEAP.

For price lists, apply, COBBETT CO. Virginia-road, Bethnal Green, London, E.

DAIRY SHOW,

LONDON.

OCTOBER 9th to 12th.

Five Classes for HONEY.

Reduced entry fee to Members B.B.K.A. and affiliated Societies.

Entries close September 10th.

WM. C. YOUNG, Secretary,
191, Fleet-street, London.

THE "WELLS SYSTEM"

Described by the Originator,

GEORGE WELLS,
AYLESFORD, KENT.

Price 6½d. Post Free.

To be had of the Author only.

Editorial, Notices, &c.

USEFUL HINTS.

(*Continued from p.* 351.)

WEIGHTS AND MEASURES IN BEE RECIPES.—A correspondent writes:—"In Bee-keepers' 'Guide Book' several recipes appear, but I am more or less in a fog as to whether avoirdupois or apothecaries' weights and measures are intended, especially when one recipe is compounded of ingredients which are weighed by both standards. I will therefore feel obliged if you will," &c.

We imagined it would have been generally understood that apothecaries' weights are only used in dispensing. However, to make the matter quite clear, let us say all weights are avoirdupois—16 oz. to the lb.—and liquids are the ordinary fluid measures—20 oz. to one pint. In reply to another correspondent who in dealing with *naphthol beta* for medicating bee food has experienced difficulty in obtaining rectified spirits of wine, we do not think that any bad result need be feared by using "pure methylated spirits" (such as is obtainable at any chemist's) for dissolving the crystals of N. beta. When the oz. packet is dissolved in the requisite quantity of spirit, the solution may be put in a phial and "measured off" by pasting a label on outside, and dividing the liquid into twelve parts, each of which is sufficient for 12 lb. of sugar made into syrup, the solution being added to the latter while hot.

FEEDING-UP.—We are glad to note a continuance of fairly warm and sunny weather, and trust that full advantage will be taken to get needy stocks fed-up without delay. Bees will now take syrup food rapidly if given warm, but in the course of a few weeks the "feeder" may be set over frames in vain, and food will frequently not be looked at by bees, even though short of stores.

UNITING BEES.—We have heard of many methods of uniting bees, but that of Dr. Miller, as published in *Gleanings*, surpasses all for simplicity. He says:—"For years I have had colonies unite, generally when I didn't want them to, by being in the same hive with a hole or crack under the division-board. Working on the same principle, here's the way I have united lately:—Having the colonies to be united in two separate hives, I set one hive on top of the other, with a piece of heavy wrapping-paper between, the paper having about its centre a hole large enough for a bee to go through. That's all. Just put one hive on the other, paper between. In a few days the paper is gnawed away, and the bees all one family. It may fail sometimes, but not thus far with me."

SUBDUING BEES.—While upon American quotations we notice a report of Mr. Heddon's views on subduing bees, which is quoted in the *Bee-Keepers' Review* just to hand. Mr. H. says:—"We believe that most of our readers understand the principle of subduing bees (a few may not) thoroughly, but it certainly can do no harm to 'stir up your pure minds by way of remembrance.' Smoke followed by a jar works nicely, but this same admixture, when it is a jar and then smoke, produces very bad results. We believe it is safe to declare that carefully avoiding any jar of the hive before applying the smoke is the text to the subject of subduing our colonies for handling. The removing of the shade-board and prying up the cover may be done quickly, but it must be done cat-like without the least jar, when the smoke may be applied under the cover, and *then* quick and rough handling is perfectly admissible. It is usually well to smoke the guards upon the first approach to the hive, especially in times when the bees are a little more irritable. After a colony is once irritated by a jar before smoking, no amount of smoke so completely subdues them."

LEICESTERSHIRE B.K.A.

The annual exhibition of this association was held on the 25th and 26th ult., in Victoria Park, Leicester, in conjunction with the Leicestershire Agricultural Society.

There were two excellent collections of hives and bee-appliances sent by Mr. W. P. Meadows and Mr. Charles Redshaw, not for competition. The class for observatory hives a good one, but the bees had to be confined to their hive for both days, no provision being made for their flight. It is to be hoped that another year this will be remedied. In the classes for sections, those obtaining prizes were exceedingly good, and the others were quite up to those seen at shows this season. The shallow-frames of comb honey were exceed-

ingly well filled, and the extracted honey class had a number of entries of excellent honey. The displays of honey were also very good. Manipulations in the bee tent were, as usual, given during the day, which were witnessed by numbers of persons, who appeared greatly interested in what they saw. The awards were made by Mr. John M. Hooker, of Lewisham, as follows —

Observatory Hive, Stocked with Bees.—1st, J. Waterfield, Jun., Kibworth, Leicester ; 2nd, J. Cooper, St. Nicholas'-square, Leicester.

Super Honey, in 1-lb. or 2-lb. Sections, not over 24 lb.—1st, J. Waterfield, Jun. ; 2nd, J. Cooper : 3rd, Thos. Wild, Melton Mowbray.

Three Frames of Honey for Extracting.—1st, John Waterfield, Jun. ; 2nd, A. Silcock, Groby, Leicester ; 3rd, W. L. Emerson, Leicester.

Extracted Honey in Glass Jars not over 24 lb.—1st, Mary Parry, Melton Mowbray ; 2nd, E. Chester, Melton Mowbray ; 3rd, J. Cooper ; h. c., J. Waterfield, Jun.

Twelve 1-lb. Sections.—1st, Mary Parry ; 2nd, C. Foxon, Croft, Leicester ; 3rd, T. Wild, Little Dalby.

Twelve 1-lb. Jars Extracted Honey.—1st, E. Chester ; 2nd, W. W. Falkner, Market Harborough ; 3rd, R. Tyler, Humberstone, Leicester.

Display of Honey in Any Form.—1st, J. Waterfield, jun.; 2nd, W. P. Meadows, Syston, Leicester ; 3rd, A. Throseby, Leicester.

Six 1-lb. Sections (in Blow's Sections).—1st, J. Waterfield, jun. ; 2nd, E. Chester, Walton.

Six 1-lb. Jars Extracted Honey, Blow's Screw Cap Jars.—1st, Mary Parry ; 2nd, J. Cooper.

WARWICKSHIRE B. K. A.

SHOW AT COVENTRY.

The annual show of bees, hives, and honey was held in conjunction with that of the Warwickshire Agricultural Society at Coventry on the 5th and 6th, one of the most interesting tents on the show ground being that occupied by the exhibition held under the auspices of the Warwickshire Bee-keepers' Association. In connection with this exhibition there were practical demonstrations of bee-keeping and the treatment of bees, as well as a capital display of appliances for use in the production of honey. During the afternoon Lord Leigh (Lord-Lieutenant of the county) and Lady Leigh visited the tent, and her ladyship presented the prizes to the successful exhibitors. At the conclusion a vote of thanks was passed to Lady Leigh for her kindness. In responding, Lord Leigh said that he congratulated Mr. Bower and the members of the association on the capital exhibition they had got together. He believed it was the largest they had had for many years, and he hoped the result would be to stimulate bee-keeping in the county. He especially hoped the practice of bee-keeping would spread among the cottagers. The association had done excellent work in the past, and he trusted the efforts of Mr. Bower and his colleagues would receive increased support. A vote of thanks was also passed to Mr. Bower.

PRIZE LIST.

Foreign Bees.—1st, W. B. Webster.

English Bees.—1st, A. W. Rollins, Stourbridge ; extra, J. Walton, Weston, Leamington.

Best and Most Complete Hive.—1st, C. Redshaw, South Wigston ; 2nd, W. B. Webster.

Hive for Cottagers' Use.—1st, C. Redshaw ; 2nd, W. B. Webster.

Frame-Hive for General Use.—1st, G. Franklin, Ryton-on-Dunsmore.

Super Honey from One Apiary.—1st, J. Walton.

Twenty-four 1-lb. Sections.—1st, J. Walton ; 2nd. S. Turner, Berkswell.

Honey in Shallow-Frames.—1st, J. Walton.

Twelve 1-lb. Sections. — 1st, J. Burman, Kenilworth ; 2nd, E. C. R. White, Salisbury ; 3rd, G. Franklin.

Extracted Honey.—1st, G. Franklin ; 2nd, J. Simpkins, Solihull ; 3rd, A. W. Rollins.

In the cottagers' class, T. Grosvenor, Knowle, was awarded prizes for an exhibit of honey from one hive and for twelve 1-lb. sections. J. Hurst, Hampton, got a second prize in the last-named class, and a first for twenty-four 1-lb. sections. Extra prizes :—C. J. Grove (Knowle), W. R. Faulkner (Leamington), J. S. Greenhill (Wimbledon), and A. J. McMillans (Kenilworth).

Collection of Hive and Bee Furniture.—1st, C. Redshaw ; 2ad, W. B. Webster.

Beeswax.—1st, G. Faulkner ; 2nd, W. B. Webster.

Driving Competition. — 1st, G. Franklin ; 2nd, J. Walton.

HEREFORDSHIRE B.K.A. SHOW AT HEREFORD.

The tenth annual honey fair and show, under the auspices of the Herefordshire Bee-Keepers' Association, of which Mr. James Rankin, M.P., is the president, took place at Hereford on the 5th inst. The judges were Miss Eyton, Secretary of the Shropshire B.K.A. and Mr. E. J. Burt, Secretary of the Gloucestershire B.K.A. The show was not quite so large as that last year, but all the classes were well filled, and the exhibits were of an exceptionally good quality. The prize list was as follows :—

Exhibit not exceeding 200 lb., *Comb and Extracted* (open).—1st, M. Meadham, Huntingdon ; 2nd, J. H. Wootton, Byford ; 3rd, W. Tomkins, Burghill.

Not exceeding 100 *lb., Comb and Extracted* (for novices).—1st, R. Grindod, Whitfield ; 2nd, W. Williams, Canon Froome ; 3rd, H. Lawrence, Burrington, Ludlow.

12 1-*lb. Jars of Extracted Honey.*—1st, R. Grindod ; 2nd, Jos. Thomas, Hereford ; 3rd, M. Meadham.

12 1-*lb. Jars of Extracted Honey* (novices).—1st, H. Lawrence ; 2nd, A. Anning, Birch ; 3rd, A. Farr, Llandiniloes.

12 1-*lb. Sections* (open).—1st, W. James, Burghill ; 2nd, Rev. F. S. Stooke Vaughan, Wellington Heath.

12 1-*lb. Sections* (novices).—1st, H. Lawrence, 2nd, J. Thomas ; 3rd, A. Farr.

Three Combs of Sealed Honey, in shallow frames.—1st, W. Hancox, Whitfield ; 2nd, W. Tomkins.

Honey taken without Killing the Bees.—1st, W. Hancox ; 2nd, A. Anning.

Best Exhibit of Honey not exceeding 12 *lb.* (Champion prize).—1st, James Thomas.

Comb Honey in Blow's Patent Sections.—1st, the Rev. F. S. Stooke Vaughan.

Extracted Honey in Blow's Screw-cap Bottles.—1st, W. Tomkins ; 2nd, H. Lawrence.

Comb Honey in "Falcon" Sections.—1st, W. Williams ; 2nd, J. Thomas.

Bottles of Extracted Honey. — 1st, J. Thomas ; 2nd, A. Farr ; 3rd, A. Anning.—(*Communicated.*)

AULDGIRTH (N.B.) B.K.A.

The annual show of the Auldgirth Bee-keepers' Association was held in connection with that of the Horticultural Society at Blackwood Holm, on the 18th ult., and the display of honey was such as to call forth the warmest praise on the part of the judges. In fact, for a district show the quantity and good all-round quality of the honey staged was remarkable. Mr. R. M'Naught, secretary of the Bee-keepers' Association, attended to this department of the show. The Rev. R. McClelland, Inchinnan, Renfrew, and Mr. T. K. Newbigging, Dumfries, judged the honey, and made the following awards :—

DISTRICT ONLY.

Super Non-Sectional. — 1st, Jas. Boyes, Burnhead ; 2nd, Robert M'Naught, Burnhead.

Three lbs. Dropped Honey in Glass.—1st, Jos. F. Hyslop, Carse Mill ; 2nd, Jas. Boyes ; 3rd, John Duff, Crawston.

MEMBERS ONLY.

Three 1-*lb Jars Extracted Honey.* — 1st, Maxwell, Blacknesk ; 2nd, J. F. Hyslop ; 3rd, R. Sloan, Carse Mill ; h. c, R. M'Naught.

Twelve 1-*lb. Sections.*—1st, John Duff ; 2nd, R. Maxwell ; 3rd, R. M'Naught, Dalgonar.

Design by Bees.—1st, Maxwell.

Six 1-*lb. Sections.*—1st, John Duff ; 2nd, Maxwell ; 3rd, J. F. Hyslop.

Six 2-*lb. Sections.*—1st, R. M'Naught ; 2nd, J. F. Hyslop.

One lb. Jars Extracted Honey.—1st, R. M'Naught ; 2nd, Jas. Boyes ; 3rd, R. Sloan ; h c, J. F. Hyslop.

Super of Honey, not under 6 *lb.*—Wm. Robson, Skewbridge.

Bell Glass.—1st, Jas. Boyes ; 2nd, Jacob Milligan, Barjarg.

Beeswax.—1st, Jacob Milligan ; 2nd, W. Edward, Closeburn.

Display of Honey. — 1st, R. M'Naught ; 2nd, J. F. Hyslop.

Special Prize for 15 1-*lb. Sections.*—1st, Jas. Boyes ; 2nd, R. M'Naught ; 3rd, J. F. Hyslop.

Special Prize for 2 1-*lb Jars* (members under three hives).—1st, Jas. Boyes ; 2nd, R. Sloan.

Special Prize for Most Successful Exhibitor.—R. M'Naught.—(*Communicated.*)

NOTTS B.K. ASSOCIATION.

BEE AND HONEY SHOW AT MOORGREEN.

The "combined" annual shows of the Eastwood and Greasley Agricultural and Horticultural Societies was held on Tuesday, September 4, at Moorgreen, and the arrangements for the show of bees and honey were under the auspices of the Notts Bee-Keepers' Association, for whom Mr. Warner ably officiated as steward. The arrangements and staging for the honey department were of the highest order, and reflected great credit on the management. The quality of the exhibits was good all round, extracted honey being especially so. Mr. Peter Scattergood, jun., of Stapleford, was the judge, and made the following awards :—

Twelve 1-*lb. Sections.*—1st, J. Annibal ; 2nd, H. Wiggett.

Twelve 1-*lb. Jars Extracted Honey.*—1st, W. Lee ; 2nd, G. Wood ; 3rd, Mrs. White ; h.c., J. Rawson.

Observatory Hive with Bees.—1st, J. Rawson ; 2nd, H. Wiggett ; 3rd, G. Reeve.

Twelve 1-*lb. Jars Extracted Honey* (local class).—1st, H. Wiggett ; 2nd and 3rd, A. Warner and G. Reeve equal ; 4th, J. W. Rawson.

Frame of Honey in Comb.—1st, A. Warner ; 2nd, J. F. Simpson ; 3, J. Annibal.—(*Communicated*).

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of August, 1894, was £2,937.—*From a return furnished by the Statistical Office, H.M. Customs.*

BEES IN BARLEY.

A NOVEL LOCATION FOR A STRAY SWARM.

Mr. John Dunthorn, South Creake, writes :—"While some harvestmen were the other day cutting barley in a field belonging to Mr. H. V. Sherringham, South Creake, they came upon a swarm of bees which had built their combs on the stalks of the barley, and had stored quite a nice little lot of honey in their cells. But still more surprising was the fact that they had a lot of brood sealed and almost ready for hatching out!"

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[2067.] The promised settled weather of August has not come to stay. We had one week of fine warm weather in which the bees gathered some honey for stores by. Since the present month September has come, the weather has been very unsettled, with a low temperature, one or two remarking that it was "cold enough to snow." There has been a good quantity of blossom, from which our bees would have gathered enough for winter store if the weather had been suitable, but now I fear we shall have to do some feeding. Districts I know vary, and possibly in some bees have garnered enough for future wants, while in others stores may be short. Where such is the case a supply should be given in quantity as fast as the bees can store it.

I am glad to hear of Mr. Lyons' successful treatment of Foul Brood (No. 2,065). If others have tried the method, please let us hear of success or failure. Discussion will elucidate the facts and render help to others in time to come. To be forewarned is to be forearmed, and, with a knowledge of a cure, the first appearance of the disease in an apiary may be easily stamped out before it has spread, as there is every probability of its doing if stocks get into a weak condition with the disease, and thus become an easy to the others when on robbing bent.

Mr. Stephenson gives a detailed account of the "phenol cure" for foul brood in *Gleanings* for August 15, but if all the detailed work there given is necessary, I myself should prefer to destroy any stock, and, after cleansing the hive and its belongings, start a new colony with a new swarm another year. The editor, Mr. A. I. Root, in a footnote disproves Mr. Stephenson's opinion and method in one or two important points. Mr. S. advances Mr. F. Cheshire's opinion that the ovaries of the queen are frequently affected so much that every egg she lays will contain the disease in embryo, therefore he (Mr. S.) advocates destroying the queen as one of the first steps in the process. Mr. Root, the editor of *Gleanings*, says that this contention is diametrically opposed to their experience and practice when dealing with sixty to seventy foul-broody colonies. Every colony was allowed to have its own queen. They were treated practically on the McEvoy method, with the addition that every colony was put into a *clean hive*, and in none of these hives did the disease develop again; and, to further disprove the theory of diseased queens, they have taken queens from diseased colonies and put them into healthy ones, and in no case has disease followed in their wake.

Then, in experimenting with phenol as a cure for foul brood, experiments proved conclusively that phenol of the strength proposed by Mr. Cheshire did not destroy the germs, and with an increased strength that killed the bees themselves it did not kill the foul brood germs. These experiments were conducted by Prof. Sargent. The cultures of *bacillus alvei* grew rapidly, and after treatment with phenol solution such as is recommended for feeding the bees. Then, after being treated by the phenol solution, other test tubes were innoculated from the cultures (after treatment), and the later test tubes developed the disease, showing positively that phenol solution of the strength recommended by Prof. Cheshire was not potent enough to destroy the germs. Mr. Root says that the most he can say for phenol or carbolic acid was that it seemed to hold the disease in check.

I have given the principal items in the footnote—by the editor—as I consider it an important point, and one which may save much labour and loss of time and money to readers who are so unfortunate as to have foul brood in their apiaries. If phenol failed in the hands of such a celebrated bee-master as Mr. A. I. Root, how could a person with little experience of bees and their ways hope to cure by a method that failed in his hands?

Re my experience with the broader top bars (in reply to a gentleman inquiring) I would say that the season has not been a fair test, the honey has not come in in quantities large enough to induce the bees to start brace combs and store cells in every crevice, but this I can say, there was only one little piece of wax attachment between the tops of the bars and the bottom of the crate of twenty-one sections in a strong swarm hived on them and the brood combs are all nice and straight. Mr. Walton, when here the other week, spoke highly of excluder zinc as a preventive of brace combs, but I have only used it under shallow frames. Mr. W. says he finds no difference in the quantity stored above the zinc than in colonies without it. Well, the fact that most bee-keepers use it below shallow frames and all colonies in "Wells'" hives carry their large takes of honey through the zinc, points pretty conclusively to the fact that it is very little, if any, impediment to bees in their work of honey storing. — W. WOODLEY, *Beedon, Newbury.*

REMOVING SURPLUS HONEY.

[2068.] In the *B.B. Journal* of August 16 Mr. Woodley (2046, p. 325) states, in "Notes by the Way," that he gave a description of the super-clearer "a week or two back." As I have looked back for two months in the journals and cannot find it, will he be kind enough to state in what No. it appears? Again, in the same "Notes," he says :—"Lift off the super, and allow the carbolised cloth to fall on . . . . brood-frames . . . . then replace super and clearer on hives, the whole operation not taking two minutes." Now, the difficulty I find in taking off supers is in loosening them from the brood-frames. It often requires the use of great force, and jars the hives, and disturbs and angers the bees. Has not Mr. Woodley this difficulty to contend with? and when he lifts the super (without smoke) is there not a rush-out of excited bees before he drops the carbolised cloth over the frames?—R. A. S., *Ripon, September* 8.

DUMMIES FOR "WELLS" HIVES.

MY REPORT ON SAME AND SEASON'S RESULTS.

[2069.] I was requested by friend "The Heathen" last November to report progress made by my bees in a double-queened hive with a dummy made of wood and perforated zinc, after it had passed through the winter with its storms, &c. It is with pleasure I do so. The stock went into winter quarters on twenty-four standard frames, with plenty of provisions. It was not again touched till March 7. I then examined, and found both queens doing well, and the stock very forward. Again, on March 29, I had another peep, and found brood in eleven frames—six on one and five the other side of dummy. On April 26 I had to super them to give more room, as the bees were getting very crowded. About a month's cold weather then set in, but with a little feeding I was able to keep them in good trim, and ready for action when the good weather set in. They then gave a splendid account of themselves, for by the end of July I had taken 256 lb. of extracted honey. This, I think, is a record-breaker for a double stock this season, and though there was such an enormous population of bees, there is not a hole in the zinc dummy propolised. So I think by this, friend "Heathen," you will agree with me that my bees have not suffered by the use of this dummy.

And now, Messrs. Editors, with your permission, I will just add my short report for this season :—I went into winter quarters 1893 with one double and six single stocks, and out in spring with one double and five singles, having lost one stock during winter. All bees in March were in good form. In April swarming with the single stocks commenced in good earnest; in fact, it was the order of the day, and, only requiring two swarms this season, I had plenty of returning swarms to do. My take of honey is as follows :—

	Extracted. lb.	Sections. lb.	Total. lb.
No. 1 double hive . .	256	—	256
„ 2 single „ . .	8	46	54
„ 3 „ „ . .	9	50	59
„ 4 „ „ . .	13	12	25
„ 5 „ „ . .	70	—	70
„ 6 „ „ . .	6	20	26
	362	128	490

This gives an average of just over 81 lb. per hive. I have set up another double hive, and stocked it with two good stocks. I shall have to feed up considerably this autumn—I think about 10 lb. per hive on the average. This done, and a nice cake of candy on top snugly tucked up, I think will complete another successful season for yours truly,—WILLIAM TUSTAIN, *Farthinghoe Station, September* 8, 1894.

PRICE AND DISPOSAL OF HONEY.

[2070.] In view of the interest aroused by the discussion which appeared some time ago in B.J. on above subjects, I hope a few lines under this heading may not be out of place. That the price of honey has gone down considerably during the past seven or eight years all will admit, and we must use our best endeavours to keep it from going lower. Beginners and others who are inexperienced, and have honey for disposal should, therefore, find out the ruling prices in their districts from a reliable bee-keeper, and not let their honey go under that price. By holding on a bit, plenty of call for it will often come in a short time.

The shopkeepers in towns are, as a rule, prone to bargain hard and get it under price if they can, and once you part with it at a lower figure than is usual it is all up; you will never be able to regain the higher price again. I remember about three years ago a bee-keeper in my neighbourhood sold his honey at a shilling per dozen cheaper than I was getting; consequently, when I called on my customers again, I had to drop mine a shilling per dozen, and the "drop" has been permanent, notwithstanding the fact that a friend of mine was told that my honey sold the best of any they got, and was of much better quality than usual. Many I know are so anxious to get rid of their honey that they will let it go for almost what the shopkeepers choose to offer them for it rather than keep it for a little time on hand. I am told that in some districts shopkeepers will not stock sections unless glazed and laced with fancy paper, and run honey put up in expensive screw-cap jars. This is a fad which bee-keepers should never have used them to unless they were prepared to pay extra to defray the cost and labour for such decorations. A bell glass large enough to cover a

dozen sections is all that would be necessary to keep them clean.

As a rule we are always able to get plenty of recruits for the craft, but after working at it for a time the first question asked is, how do you get rid of your honey? Who do you sell to?

Of course bee-keepers can and must do a great deal locally, by way of clearing out their surplus honey, and I would say to them, buy a few pamphlets on "Honey and its Uses," such as the one, or similar to that brought out by the Rev. Mr. Bancks, and distribute them in their neighbourhood; this they will find to be a great help.

But I am afraid the subjects here dealt with will not affect us in so poor a season as this has been, consequently there will not be much surplus honey on hand to clear out.—COMPETITION, *Dorset*, *August* 31, 1894.

[We have been compelled to considerably abridge our correspondent's no doubt well-meant letter, and by way of explanation venture to observe that it is all very well to suggest, among other things, that we should get "two or three of the leading London papers" to devote space "annually about the month of July" to a series of articles expatiating on the virtues and super-excellence of British honey, but our correspondent's suggestion comprises a rather large order in free-advertising, which those very wary persons, the editors of the aforesaid papers, might possibly not see in quite the same light as it presents itself to the vision of the bee-keeper with honey to sell.—EDS.]

Queries and Replies.

[1147.] *A Beginner's Troubles* — I began bee-keeping this year with a friend who has kept bees for about twelve years on the modern system, and should consequently know all about it. At the end of the season he extracted honey from a comb containing brood which was not replaced in the hive for some two weeks after. I am quite aware that this is not considered right. I was then told to raise the dummy ¼ in., and place the frame behind it, when bees would clear it out. The bees cleared the honey out, but did not touch the dead brood. I send you a piece of the comb. Will you kindly tell me: 1. If you see any appearances of foul brood? 2. What is the moist-looking substance in the cells next the capped ones? I have several store combs taken from hives with a good deal of it in, and have always wondered whether it is pollen, or if it is the milky substance put above the brood by the bees, as I see mentioned in the "Guide Book." I am sorry to say that in the outside frame of the hive referred to I found some comb rather like the piece I send. The cappings were almost the same colour, and perforated with small holes. It did not smell badly. I removed the frame and took it in, opened the cells, and found inside a sort of dark, pasty substance. I took this for a mild case of foul brood. 3. Do you think it is so? I cut out all the comb except a little honey in the top and burnt it. The bees are now on six frames; there are not very many. I have fed them with ordinary syrup, and now propose salicylising it and putting naphthaline in the hive. 4. Can I do anything else? The other frames contained healthy brood (four of them). I was told to gradually reduce the number of frames to seven in all my hives, to uncap any honey in the extra frames and put behind the dummy, when the bees would remove the honey. I have done so, but the bees seem to put more honey in instead of taking it out. 5. How shall I clear these? I have no extractor. Would it do to lay the frame on its side on top of the others? One hive that has given no honey this year requeened itself. My partner took one of the extra queen-cells and put it on a frame in another hive, killing the old queen. He evidently did not fix it securely, for I found it on the floor still sealed. I took it away, but found nothing inside it but a few grains of granulated stuff, but there was a hole in the bottom communicating with an ordinary cell. He put the cell in two weeks ago, when he killed the queen. On looking to-day I found plenty of sealed brood, and the hive was so full of bees I could not see if there were any queen-cells or not, as the bees were so thick on the frames, and I had no assistant to smoke them when I lifted them out. The hive was full of drones. 6. Do you think the queen got out of the bottom of this cell through the ordinary cell? Or, if not, (7) Is it too late to have the queen they are probably raising fertilised? Please excuse the haste in which this was written, and I should be glad if you would reply to this under the pseudonym of—DUM SPIRO SPERO.

REPLY.—1. Yes, comb is foul broody. 2. Pollen. 3. It is not a bad case. 4. How do you judge the brood to be "healthy"? A good portion of it may be dead in the cells. The combs should be examined a week hence, and if brood is seen to be hatching out all right, curative measures may be resorted to, otherwise we should destroy the bees, combs, and honey. 5. When the honey income stops and breeding has ceased, give back such of the combs of food as are not "cleared out" to the bees, unless an extractor is available. 6. The details given are somewhat perplexing to an outsider, and, without the means of verifying by inspection, it is out of our power to say how matters stand. We should suppose the queen in cell, given a fortnight ago to have been destroyed, and that a successor has been raised, has probably just hatched out. This will account for the hives being "full of drones" at this season. 7. So long as drones are tolerated there is a chance of young queen being mated, and if the former are killed off

in a few days it will indicate safe mating, but only examination of combs for normal worker brood later on will show clearly what has happened.

[1148.] *Imperfect Bees Cast Out.*—I enclose a few young bees which I have found cast out of the hive from day to day during the last three weeks. They are evidently imperfectly formed or immature. Can you explain the reason? The queen is one got a month ago, from Mr. Simmins. Your reply will oblige J. CLAPPERTON, *Galashiels, September* 4.

REPLY.—The diminutive size of young bees, and their imperfect formation, plainly point to the fact of their having been badly nurtured while in the larval state. We should suppose that there had been insufficient bees in the hive to cope with the increased prolificness of the newly-introduced queen, and that in consequence the brood has been poorly nourished.

[1149.] *Packing "Wells" Hive for Transit.* I am sorry to have to trouble you, but there is no expert here that I can go to for advice. Although I have kept bees for a long time, I have never had to pack any for travelling, and am in doubt, this being rather a different case from ordinary. To be brief. At end of July I bought "Wells" hive. This is on the Ford-Wells system, air space beneath frames 7 in. I am now unexpectedly called on to move, and I want to get this hive into Essex, about sixty miles, by road or rail. I therefore ask :—1. How am I to fix the bottoms of frames to prevent them from swinging? Will it do if I screw down the shoulders of each frame, bearing in mind that the bees were hived on full sheets wired foundation second week in August? 2. How will it be best to send hive, by road (carrier van), changing carrier in London, or by rail, changing through London? 3. Will it be best to send it first week in October, or wait till November or Christmas? 4. If weather is very cold—say, six or seven degrees of frost at night—must I leave quilt off top of perforated zinc? Bees will cover seven frames each side. Any help you can give me will be greatly esteemed by P. H. GRAY, *Tring, September* 8.

REPLY.—1. Yes. 2. We should, if at all possible, accompany the hive (by rail) and see to the handling of it personally. 3. It will travel best in winter weather. 4. With so low a temperature quilts should remain on. There is no disguising the fact that to transport a "Ford-Wells" hive safely through the journey named will be a risky job, and if left to carriers or railway-porters, with no one by who understands the contents of the hive, damage may follow. It is, however, a great help to have the bees on "wired" combs, and, with the useful space below frames, together with careful handling, it should be landed safely.

[1150.] *Swarmed Skep Cleared Out by Robbers.*—I began bee-keeping this spring by purchasing a stock of bees in skep for 15s., and a heavy stock it was. A swarm came off early in the season, and a little later on another—both fairly strong swarms—which I hived successfully, the first in a frame-hive and the second in a straw skep. Both swarms have done fairly well considering the season, the first swarm filling all the frames in brood-chamber and giving me some 6 lb. of honey in super. A short time since I noticed the bees in the old or parent stock were not working well. They seemed to have lost their energy, and I noticed them running continually to and fro on the alighting-board close to the entrance, and occasionally I would see several bees in fierce combat. Evidently robbing had started, and I decided to "take" them a little later on. On the 2nd inst., however, my suspicions were aroused by noticing the absence of bees at the entrance, and by bees and wasps going in freely without interruption. On turning up the skep there was not a bee to be seen, only a few dead ones on the stand; no sign of any honey, and the comb has all appearances of being very old. I don't understand about foul-brood, but do not think it is that, for there is no foul smell—on the contrary, it is an agreeable one. 1. Would you kindly inform me whether the bees were gradually overcome and destroyed by robbers, or have they left the hive in a body? 2. Is there any trace of foul-brood in comb which I am forwarding?—FRANK GALE, *Newport, Isle of Wight.*

REPLY.—1. The skep, after swarming twice, has become queenless, and the bees, having no means of raising another queen, have gradually deserted their old home, most of them no doubt joining other stocks. The few that remained would soon succumb to the robbers and depart with them. 2. Comb sent is perfectly healthy.

[1151.] *Dealing with Foul Brood.*—In preparing my bees for the winter I find that two hives are affected with foul brood—stock and swarm. At the beginning of the year the stock was in a straw hive, and became strong very early and swarmed in May. The swarm rapidly increased, and, although there is no surplus, the hive is now crammed with bees, and there is a fair supply of stores. The stock threw a cast on the ninth day, but it returned, and was not known to come out again. A fortnight later I drove the bees from the skep into a frame-hive on full sheets of foundation, and fed them for several weeks. During August I was away from home, and on my return I find that the bees have only drawn out some six of the combs, and they have only a small quantity of honey laid up. In the hive which contains the old queen many of the combs have foul brood cells, half a dozen or so scattered over each side. In the hive containing the young queen there are probably in

all not more than twenty-five foul brood cells altogether. I need not send you any of the comb for I know it is foul brood. Will you kindly advise me as to procedure. I don't think the case is very bad, and there is no evil smell about the hives. I mean to save the bees if possible, but will unite the two lots. Shall I keep the old queen (1893) or the young one (1894)? Is it too late to try the McEvoy system, feeding up with medicated syrup four days on starters, and then placing the bees on full sheets? Or do you suggest another treatment, seeing that matters are not very bad? My only other stock of bees is quite healthy, very strong, did not swarm, and gave 45 lb. comb honey.—JNO. BEVERIDGE, *Wolverhampton, September* 10.

REPLY.—It is certainly late to get combs built out, but with so many bees to deal with we should try the plan referred to. By careful feeding, warm medicated food, and with only so many frames as the bees can be crowded on to, they may get into condition for winter with new combs and young queen.

[1152.] *Adding Driven Bees.*—I had a stock of bees in skep, which (after throwing a strong swarm in June) dwindled considerably. I suspected queenlessness, and, on driving them from the skep, found it was so. I hived them in a frame-hive, gave them a couple of frames of sealed brood, and introduced successfully an Italian queen. This I did at the end of July. On examining the hive a fortnight since, I discovered the queen, but could find no eggs or brood whatever. The hive was quite empty of stores, and but few bees left. Would it be advisable to obtain driven bees and add them to the stock? If so, what would be the best way to add them, and if fighting is likely to occur, how might I prevent it, as I wish to keep the Italian queen?—RAYMOND WILMOT.

REPLY.—It is somewhat odd to find "no eggs or brood whatever," especially when frames of sealed brood was given to the bees along with Italian queen. And the question arises whether the latter is sufficiently prolific to be worth preserving. In any case we should save the queen of any driven bees bought for uniting until her breeding powers are tested with plenty of bees to induce ovipositing. When adding driven bees, throw the latter out in front (after securing Italian queen), and shake the bees from combs on to them as they run in.

[1153.] *A Late Swarm.—Autumn Feeding.*—It may interest you to hear I had a small swarm on Friday, August 31. It only weighed about 1 lb., and not knowing which hive they came from, and having no frame-hive ready, I have hived the bees in a skep and am feeding them. 1. Can you give me any probable reason for such a late swarm, as well as why it is so weak? 2. I thought of giving my stocks the necessary autumn food with the usual bottle-feeders, as I found last year that a great many bees got drowned in the rapid-feeders. Do you think I can do this successfully? 3. I have been stimulating my stocks for the past three or four weeks (two holes of bottle-feeder). Do you not think this can be overdone? Bees have done badly in this district, so far as I can hear. Skeps appear to have done best, as I find some cottagers are taking off a super here and there. I have had to feed mine, and have given them 120 lb. of sugar made into syrup; how much more they will want I know not. I have increased my stocks from nine to eighteen, and have only had about half a cwt. of honey. Hope for better results next year.—H. E. JEAL, *Pitts' Wood, Kent, September* 3.

REPLY.—1. With no particulars of the present condition of the stock from which the swarm issued to guide us we cannot offer an opinion of any worth as to why the bees left. They may be a "hunger swarm," or may have deserted their hive for several reasons at which no useful guess can be made. 2. With a properly-made rapid-feeder there is no need for bees being drowned. You may, however, feed up by using large bottles inverted with the mouth covered by muslin. 3. Stimulative feeding should now cease, and rapid feeding take its place, but it has not been "overdone" in your case.

[1154.] *Bees Dying from Unknown Causes.*—Will you kindly say if there is anything in accompanying syrup-food likely to cause injury to bees? At the beginning of August I had five good stocks—two in a 'Wells' hive covering twenty-four frames, and three others raised from nuclei with young queens, well covering six frames each. About a fortnight since we had a few very cold nights and wet days, causing bees, as I think, to cluster and hibernate, leaving all brood, which is now dead, in each hive. On Monday, September 3, I left home for the week, and to-day, on looking round, I see thousands of bees dead and dying, and, what is more surprising, on looking into and examining the hives, find there are just about sufficient bees in the three smaller ones to pull through the winter, when united together—*i.e*, under best conditions. The two stocks in the "Wells" hive have so dwindled as to be useless as two stocks, and must also be united. The food given was made from some "Tate's" lump sugar, which had got somewhat dirty, and I bought cheap from our grocer; boiled in the usual way with nothing but waterworks water.—"CONISTON VILLA," *Bristol, September* 8.

REPLY.—We are unable to say if any deleterious substance has got into the sugar. It has a slightly curious taste, but that, of course, might arise from a dozen causes, all quite harmless. If the bees were injudiciously fed during your absence from home a good

deal of slaughter could occur through "robbing," but hardly to the extent named; but to get a professional analysis of the syrup sent would be costly, and might not yield any satisfaction after all. Your deduction as to brood also may be in a small measure correct; but "all brood" would not be deserted by the bees and allowed to chill and die. So there must be some other reason not apparent in your note for the present condition of the stocks. No doubt you have ceased feeding with the suspected syrup, and perhaps may have learned something from that—which we shall be glad to hear—from the fact that mischief has happened to bees to our knowledge from using damaged sugar "bought cheap."

Bee Shows to Come.

September 12 and 13. — Scottish Bee-Keepers' Association, in connection with the show of the Caledonian Horticultural Society, Waverley Market, Edinburgh. Schedules now ready. John Wishart, assistant secretary, Castlecraig, Dolphinton, N.B.

September 15.—In the Corn Exchange, Jedburgh. Roxburghshire B.K.A. Annual show of honey, &c. Twenty-seven classes. Eight silver medals and liberal money prizes. Entries closed. Thos. Clark, secretary, Pleasants, Jedburgh, N.B.

October 9 to 12.—Dairy Show at the Agricultural Hall, London. Five classes for honey. Liberal prizes. For particulars apply to Wm. C. Young, Secretary, Dairy Farmers' Association, 191, Fleet-street, London, E.C. Entries closed.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

J. C. Bamlett (Penzance).—*Wells Hives.*—No description, "with details as to construction" of the "Wells" hive has appeared in our columns. As a matter of fact, we suppose the only one who can supply such details is Mr. Wells himself. Descriptions (with illustrations) of several forms of "Wells hives," as furnished to us by the manufacturers thereof, appeared in our pages during the month of March, 1893. We have also been informed that, in addition to Mr. Meadows, of Syston, Mr. Redshaw, of South Wigston, and Mr. J. H. Howard, of Holme, manufacture a "Wells hive" on the "W.B.C." plan.

Shepperton (Middlesex). — *Expert Help Wanted.*—By becoming a member of the county association you will be entitled to the assistance of the expert when on his autumn tour inspecting the hives of members. Write to the hon. sec., Major Fair, 11, Anlaby-road, Teddington.

W. Goodall (Yorks).—Comb sent in badly affected with foul-brood. If the stock is weak there is no hope for it at this season. Bees, honey, and combs should therefore be destroyed by burning, and the hive disinfected before using again.

Stonehouse. — *Varieties of Heather.* — No. 1, the common "ling"—*Erica* (or *Calluna*) *vulgaris*—is *the* honey-yielding heather. No. 2, *Erica cinera*, is known as Scotch heath, or bell-heather, and is of little value as a honey plant.

J. H. Burton (Beaumaris).—No doubt the dead brood is "chilled," not foul, and there are no serious grounds for fearing another outbreak if all food given is medicated, and preventives against infection are used in all tenanted hives.

W. B. (Lowestoft).—If sugar is sold as pure cane, and the tradesman is reliable, it may be used. It is impossible for us to guarantee it or condemn it from mere inspection of a sample.

G. C. Lyon.—*Curing Foul Brood.*—We were led to make the reservation in footnote to 2065 (p. 357) for the reasons stated therein. Had we been furnished with the further particulars since supplied, our remarks would not have been necessary. We were, however, led to pen them from the fact of it being only too well known to us that combs "smelling very strong, and with hundreds of rotting grubs in the cells," were plentiful enough in stocks "not strong" at the time referred to, without them being affected with foul-brood at all.

Jas. Jones (Gloster).—Comb received contains about 95 per cent. of healthy brood, which has by some means got "chilled." Foul-brood is, however, apparently just breaking out, and, in view of the stock being "very weak and dwindling," we should destroy it by burning combs and the few remaining bees.

J. H. Horn (Bedale).—*Old Honey for Feeding.*—Old honey is scarcely so good for syrup making as cane sugar, and, having already been "boiled," will require "letting down" with water to the consistency of ordinary syrup for autumn feeding. We should advise its being mixed with sugar syrup.

C. Hopkins (Droitwich).—*Requeening.*—Being a driven stock of last year, it is advisable to requeen for '95, though there is nothing very unusual in the queen having ceased breeding for the present season, seeing how little honey has come in for many weeks past. If the spotting on alighting board is excessive, it may "mean dysentery," but we do not think it very likely. Good warm food and a dry hive are the remedies for the latter.

Son of the Rock (Alloa).—*Feather cushion for Bees.*—1. The Cowan hive is, of course, "a stock hive," and may be had from any

known hive maker. 2. No doubt a feather-cushion will retain heat very well, but less costly materials should serve for bee-purposes.

HYBRID.—Cyprians are known to be very uncertain in temper, and occasionally develop extraordinary viciousness.

G. HEAD (Winkfield).—Of the samples of honey, Nos. 1 to 4 are all good, and much alike in quality. No. 3 we think best, and 4 next, but there is really little to choose between them. There must be some mistake in referring to No. 5 as being "so thick that it cannot be got out by the extractor." It is by far the thinnest honey of the lot. There is a slight heather flavour about it, but not at all pronounced. The three queens received show no outward signs of old age; we should judge them to be naturally unprolific.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

THREE HEALTHY STOCKS of BEES, in Frame Hives, 18s. each. M. WOOD, 23, Morris-street, Rodborne-lane, Swindon. F 23

PURE ENGLISH BEES.—Queens, 3s.; Swarms for uniting with queen, 5s. ALSFORD, Expert, Blandford. F 19

HONEY WANTED.—Will the friends who send me their Honey send in samples, price, and quantity early. GARNETT, Steade-road, Sheffield. F 18

EXTRACTED ENGLISH HONEY, warranted pure, about 1 cwt., 8d. per lb.; sample free. R. MERCER, Long-street, Atherstone. F 22

BEAUTIFUL HEREFORDSHIRE HONEY, in screw-capped bottles, and 4, 10, and 14 lb. tins. Sample 2d. THOS. CHARLES, Much Marcle, Glos. F 20

DRIVEN BEES at 1s. 3d. lb. Young queen. Package free and on rail. Cash with order. R. BROWN, Flora Apiary, Somersham, Hunts. F 11

WANTED, SECTIONS of HONEYCOMB (first quality). Prompt cash; packages sent. Any quantity. E. HURST, Bexhill, Sussex. 235

LACE PAPER for GLAZING SECTIONS. Three neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

FERTILE QUEENS, bred by selection, 5s. Very prolific. Ordinary Fertile Queens, 3s. 6d. Post free. Safe arrival guaranteed. Rev. C. BRERETON, Pulborough, Sussex.

FOR SALE, 4½ CWT. pure ENGLISH HONEY at 6d. per lb. Payment by deposit system. Address, C. M. EAGLETON, The Apiary, Parson Drove, Wisbech. F 9

FOR SALE, Good, Healthy STOCKS of BEES; 15 in frame hives, two in skeps; all well stored for winter. Reference to Secretary, British Bee-Keeper's Association. Address, J. MARSHALL, Home Park, King's Langley, Herts. F 21

Prepaid Advertisements *(Continued)*

FINE-TESTED 1894 FERTILE QUEENS, 3s. 6d. each. Safe arrival guaranteed. 3-frame nuclei, 10s. 6d. Packing included. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. F 15

NEW HONEY WANTED, any quantity, clean, well-filled and sealed 1-lb. Sections. State quantity and price for cash. Address, M. CHARLTON, Fruit Merchant, Fawcett-street, Sunderland. F 1

HEALTHY 1894 Fertile NATIVE QUEENS, 3s. 6d. each. Four Stocks same strain have this season yielded over 100 lb. each. A. SIMPSON, Mansfield Woodhouse, Notts. F 7

NOTICE.—CARBOLIC TOWEL, and Samples of my BEE-SMOKE CARTRIDGES Free (during Sept.) to all Purchasers of my CARBOLINE POMADE. T. HOLLIDAY.

INDISPENSABLE to HONEY DEALERS.—HARGRAVE'S Folding Cardboard BOXES for 1-lb. Sections. Sample 3d. post free. HARGRAVE, Harrogate-road, Ripon.

MARKET for SECTIONS, EXTRACTED HONEY, and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

QUEENS, a few of my special 1894 LIGURIAN HYBRIDS for SALE, prior to packing down for winter. Safe arrival guaranteed; 3s. 6d. post free. H. W. BRICE, Beulah-road North, Thornton Heath, Surrey. 244

NOTICE.—I am Uniting a lot of late swarms, and shall have some young, healthy, natural-raised, '94 Fertile QUEENS for SALE at 2s. each. Can send by return post. A. J. CARTER, Billingshurst, Sussex. 243

8 STOCKS, one Nuclei, Healthy BEES, cheap, in bar-frame hives, complete, 15s. each; purchaser to pack, take away. Or EXCHANGE for good Pneumatic Bicycle. They are worth 18os.; new Guinea Extractor, 15s. LYON, Soham, Cambs. F 17

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

TO HIVE MAKERS.

GOOD PINE PLANKS.

Largest Stock in London.

VERY DRY, SOUND, CHEAP.

For price lists, apply, COBBETT CO. Virginia-road, Bethnal Green, London, E.

HONEY AND ITS USES. By the Rev. GERARD W. BANCKS, M.A. 3/6 per 100, 8/- per 250, 14/6 per 500, carriage paid. By freely distributing this Pamphlet, a ready market for Honey may be made in the Bee-keeper's own neighbourhood.

Specimen Copy on application.

Address Durham House, Green Street Green, Dartford. 176

MY LATEST PRODUCTION.—The "TILLEY" HIVE, made entirely on the principles laid down by Professor Tilley, and used in his extensive apiaries at Dorchester. The Tilley hive is no catch-penny article that the wind and rain will blow through, but is the cheapest, most substantial, and sensible hive now on the market, and when generally known is bound to be universally adopted. Note the price, 12s. 6d. complete. Painted three coats of best oil paint, and with zinc-covered roof. Every bee-keeper should send for my list.

RANDOLPH MEECH,
Broadwindsor, Dorset.

Editorial, Notices, &c.

UNIVERSITY EXTENSION COLLEGES

AND TECHNICAL INSTRUCTION IN BEE-KEEPING.

A somewhat significant sign of the favour with which bee-keeping is at present regarded is afforded by the fact that it has just now been adopted as one of the subjects for instruction by University Extension Colleges. The prospectus of a "Special Course of Instruction in Poultry-farming, Horticulture, and Bee-keeping," in connection with the agriculture department of the University Extension College, Reading, is now before us, and we note that lectures on Bee culture by Mr. W. H. Harris, B.A., B.Sc. (one of the examiners of candidates for certificates as experts to the British Bee-keepers' Association), and Demonstrations in Bee-keeping by Mr. A. D. Woodley, are included in the course.

After what has already been done by County Councils in various parts of the kingdom by way of promoting technical instruction in bee-keeping, it cannot be otherwise than gratifying to note that the pursuit in which our readers, along with ourselves, are especially interested is now being raised to a higher plane by its inclusion in the University Extension scheme.

Considered in connection with the proceedings which took place at the meeting of representatives of Northern and Midland Bee Associations, affiliated with the British Bee-keepers' Association — reported in our issue of the 30th ult.—and the resolution passed thereat having reference to the parent association, arranging "examinations for scientific lectures at agricultural schools and institutions," the extension of the movement southward is doubly interesting. Nor have we any doubt that this latest development will be the means of bringing to the front a class of lecturers on bees and bee-keeping possessing the necessary culture and training which alone will enable them to rank among the higher class of scientific teachers now engaged in the work of technical instruction throughout the country.

We trust the next step to be noted will be the recognition of apiculture by the Board of Agriculture. Following that will come the much-required legislation relating to so-called "foul brood."

BRITISH BEE-KEEPERS' ASSOCIATION.

Meeting of the committee held at 105, Jermyn-street, on Thursday, the 13th inst. Present—H. Jonas (in the chair), W. B. Carr, J. Garratt, W. H. Harris, J. H. New, E. D. Till, and J. M. Hooker (*ex-officio*). The Baroness Burdett-Coutts, President of the Association, was also present, and presided during part of the proceedings.

Communications were received from the Treasurer, Mr. W. O'B. Glennie, and from the Rev. G. W. Bancks, regretting their inability to be present.

The Secretary was also unable to attend through illness.

Reports were received from sub-committees. The Exhibitions sub-Committee recommended that arrangements be made for the disposal of small samples of honey and literature, together with the exhibition of bee-keeping objects at the forthcoming Dairy Show. The report of the Exhibition Committee was adopted, and Mr. Till and Mr. Garratt were appointed as stewards on behalf of the association to carry out these arrangements.

The sub-committee appointed to revise "Modern Bee Keeping" reported that they had made some progress with their work, but much remained to be completed in order that the work might be thoroughly revised and brought up to date.

Thr President drew attention to a letter which had appeared in the *Times* of that day's date on the subject of bee-keeping. It was resolved that a communication, commenting on this letter, and drawing attention to the subject of bee-keeping and the work of the association should be sent to the *Times*, bearing the President's signature.

The following new members were elected:—

Mr. S. Aston, St. Albans.

Mr. C. Redshaw, South Wigston.

Mr. H. Twentyman, Wolverhampton.

The committee adjourned to Thursday, October 11, on which date an evening conversazione will be held.

ANTWERP UNIVERSAL EXHIBITION.

The week's show of bee-keeping appliances, honey, wax, &c., held in connection with the above-named exhibition, is of considerable interest, as showing the advance the Belgians have made in bee culture since 1888, at which time their first bee show was held in connection with the International Exhibition at Brussels. At that time all the Belgian exhibits were very primitive, as will be remem-

bered by those who visited the show or read the report in the columns of the B.B.J. A great advance has been made, especially in the way of putting up run honey. It is safe to say that in these classes there was not a single bad exhibit, and many showed the greatest taste, added to which the whole of the honey was of high quality and fine colour. It was very curious to notice that, though Belgium is a great glass-producing country, yet more than 50 per cent. of the total exhibits of extracted honey was in bottles supplied by a well-known English firm. The award of prizes in these classes were very curious indeed—quite different to the ideas of English judges.

In section honey the Belgians do very poorly, the total number of sections on show being only about 100—the whole, however, being got up much in our English style, all being glassed and cased. Many inquiries elicited the fact that comb honey does not sell well in Belgium, and therefore very little is produced.

In the wax classes every exhibit was of high excellence. The French exhibit of L'Abbe Bédé being very fine indeed. The great secret of the preparing of this wax seems to be not to melt it more than once, the colour and smell being damaged by repeated meltings. In foundation improvement is needed, the greater part of that exhibited being very thick and unevenly made, and produced by machines of German make, we were told. Some remarkable flat-bottomed drone foundation was on view, with cells about 3 to 1 in.

Of the general appliances little need be said, as nearly all were bad copies of articles made by well-known English firms, the only exceptions being probably in the wax and honey-extractor classes. Honey-extractors were in great force, about fifty standing in a row all down the wall of the building. Nearly all were of the same type, with vertical gear driven by a handle at the side. Many were useful machines, but very ponderous, nearly all being to extract four combs at one time. Several we noticed had a capital idea for keeping fine wire tightly strained without the aid of any backing whatever, which might with advantage be adopted by our English makers. The most primitive among the extractors was a paraffin barrel, painted inside, and fitted with galvanised wire, cages, and a string gearing!

The hive classes were very large, one maker having fifteen exhibits in one class. The hives of Mr. Mees and Mr. Varlet were well constructed, and both makers had apparently given a good deal of attention to English and American models. Little need be said of any other hives shown. Many were got up in imitation of houses, &c., and in nearly all cases had not got beyond the notch-spacing. The amount of trouble and complication taken in spacing the frames in all the hives is beyond conception, and almost reduces some to fixed comb-hives before they are stocked with bees. Assuredly they will be fixed combs after stocking. The less said the better about the way the hive prizes were awarded. We should be much astonished to see prizes given to hives with elaborate staple-spacing, or with racks of wire or zinc which would not allow the combs to slide; but to see a bronze medal awarded to a hive covered from bottom to top with zinc is beyond our imagination, and we can only surmise that this prize was given because the whole structure resembles the sort of ornamental house covered with zinc of which the Belgians are fond. The floor-board of this hive rests on four massive metal Belgian lions' heads.

Only one English exhibitor was present, Mr. T. B. Blow, and we notice that he has received twelve awards. With the foreign exhibitors generally there was a good deal of dissatisfaction, and we fear that in future no bee-keepers outside Begium will be induced to send goods to shows in that country, for we consider the international jury to have been to a great extent a farce, and its members not to have been bee-keepers of any high standing or of advanced knowledge. The manner, too, in which the prizes offered were withheld gave the greatest dissatisfaction, and was looked upon as getting people to send goods under false pretences—one well-known French bee-keeper going so far as to call the officials "*brigands*." To such an extent was this withholding of prizes carried, that in several instances where, say, three or four prizes were offered, only one (generally the smallest) was awarded, and in nearly all cases the better prizes were awarded to Belgians, and foreigners had to be content with honourable mentions. Mr. T. W. Cowan, who was invited to act on the international jury, was not able to be present, and therefore did not take part in the judging, otherwise we feel sure he would have entered a protest against such unfairness in the judging. We trust that in future, if the competition is thrown open to all nations, more fairness will be done in this respect, as the foreigner is put to great expense in sending his goods.

WORCESTERSHIRE B.K.A.

The annual show of the above association was held on August 23 at Madresfield Court in connection with the Madresfield Agricultural Club Show.

A considerable quantity of honey was staged in a large tent 145 ft. in length, which had been kindly lent by Earl Beauchamp for the purpose of exhibiting butter and honey.

The sections of honey which were staged were not of the average quality, but considering the unfavourable season through which we have passed they were fairly satisfactory, while some of the exhibits of extracted honey were of very fine quality. Competition in the classes for honey in bottles was very keen, and

the judges had some difficulty in determining which was best.

Besides honey, there was a display of hives and appliances used in modern bee-keeping, by Mr. Huntley, of Worcester, and a very attractive and instructive display of comb in various stages of progress, as well as other items of interest to bee-keepers arranged by Mr. Percy Leigh, of Stoke Prior.

The entire arrangements of the show were under the direction of the hon. sec. of the Association, the Rev. E. Davenport, of Stourport. A. H. Martin, Esq., J.P., of Evesham, an enthusiastic bee-keeper, and a long-tried friend of the Association, and F. W. Jones, Esq., J.P., C.C., were, by the authority of the B.B.K.A., the appointed judges, and these gentlemen discharged their duties in the most praiseworthy manner.

An episode of a very unpleasant character occurred whilst the judges were engaged at their work, and the incident shows the expediency of having the tent entirely clear of all exhibitors during the time of judging, which on this occasion could not well be done on account of the heavy rain falling at the time—but *experientia docet.*

The incident referred to occurred thus :—A certain exhibit was being examined by the judges, when it was found one of the sections was not what it professed to be—a fact which the judges detected, and at once stated ; but the statement was overheard by the exhibitor, and he removed the faulty section, and substituted another in its place, and then challenged the decision of the judges ; but those gentlemen discovered the imposition, and though at first the act was denied, the party has since acknowledged his fault, pleading ignorance of customs at exhibitions as his excuse.

The matter is to be referred to the executive for further consideration.

The awards of the judges were as follows :—

Observatory Hive and Bees.—1st, A. W. Rollins, Stourbridge ; 2nd, Rev. E. Davenport.

Twelve 1-lb. Sections. —1st, C. H. Haynes, Hanley Castle ; 2nd, A. W. Rollins.

Six 1-lb. Sections.—1st, C. H. Haynes ; 2nd, J. Styles, Kents Green.

Twelve 1-lb. Jars Extracted Honey.—1st, C. H. Haynes ; 2nd, Percy Leigh.

Six 1-lb. Jars of Extracted Honey.—1st, Percy Leigh ; 2nd, Rev. E. Davenport.

Three or Six Shallow-frames of Honey of 1894.—1st, A. W. Rollins ; no second.

Most Complete Hive (the work of an amateur).—1st, R. T. Bullock ; no second.

Best Bar-frame Hive suitable for Cottagers. —1st, C. Redshaw, South Wigston ; 2nd, H. O. Huntley.

Six 1-lb. Jars Extracted Honey (Cottagers only).—1st, R. T. Bullock ; 2nd, J. Edwards.

Beeswax.—1st, Percy Leigh ; 2nd, H. O. Huntley.

Collection of Hives and Appliances.—1st, H. O. Huntley ; no second.

GIFT CLASS.

Best 1-lb. Jar of Extracted Honey.—1st, C. H. Haynes ; 2nd, Percy Leigh.

Special Prize offered by Mr. T. B. Blow, for best Six Sections of Honey, in Blow's patent sections.—1st, C. H. Haynes.

Do., Best Six 1-lb. Jars Extracted Honey in Blow's bottles.—1st, C. H. Haynes ; 2nd, Percy Leigh.

Special Prize for best display of Honey in Sections and Jars.—Percy Leigh.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

QUEEN-REARING.

THE RESULT OF THREE YEARS' EXPERIMENTAL WORK.

[2071.] In taking up my pen to lay before your readers the results of my experiments in queen-rearing, I for the first time realise the tremendous extent of the work undertaken in striving to render intelligible the multitude of notes I have made for the last three years of the various manipulations carried out, and of making my observations interesting to those who care to wade through them. On looking back to the spring of 1892—when it first occurred to me that the usual run of queens in our apiaries were not all that could be desired —and the years that followed and have gone, as though all the work, the anxious hours passed in waiting for the result of this or that experiment, the variable weather, the disappointment over failure and the gladness when I succeeded ; all this seems like one long pleasant dream spent among the bees and the flowers they love so well ; winter came and went, but I seem to remember little, for was I not even then with the bees, either in the past or in my mind's eye *in futuro*, aye, truly.

Now, at the outset I must ask readers to disabuse their minds of the fallacy that first-class queens can be reared by simply cutting up a piece of comb containing eggs or larvæ and giving it to the bees. Good queens cannot be raised by rule of thumb. Some people, to

suit their own ends, will tell you that queens can be raised anyhow, and that their pet method of raising them is the only way, and that any other which they have not tried, or tried and failed in, is wrong and necessarily bad, but most folks know where the proof of the pudding lies, and after raising queens by every known method up to the present time I feel that the experience gained enables me to a certain extent to speak on this—to bee-keepers—all-important matter with some confidence. I say all-important, because if readers would only think it out they would at once realise that "everything tending to successful bee-keeping centres in the queen," and I am fully convinced that the royal road to success in our craft—if royal road there be—is to have our colonies headed by the finest and most perfect queens we can rear or otherwise obtain, and such queens can, in my opinion, only be reared at the proper time—viz., the natural swarming season, which is the only natural season for queen-rearing. Queens can be reared at other times, it is true, but the bees rear them from necessity, not by natural desire, and, as with ourselves, things done unwillingly or through necessity are rarely done well.

To rear queens after the honey or swarming season is over, you have to get them raised in queenless colonies, which, when the honey season has gone, are very loth to take the job on, and will often leave the larvæ until it is three days old before commencing to feed it properly, whereas if the task be given them in proper season, and from proper material, the cells are started at once, and upon larvæ under thirty-six hours old and fed on the right food from the commencement. Therefore, one great fact to be borne in mind is, that if you want good queens, make sure they are raised in proper season and under proper conditions. Then comes the question, What are the proper conditions? To my mind they are (1) that the stock that raises the new queens should be strong and flourishing, and (2) have a laying queen in the hive while the new ones are being raised. And I maintain that only under such conditions can the best and most perfect queens be raised. Such queens are fine, strong, prolific, and long-lived, and will give such an account of themselves that it would take half-a-dozen unnatural productions (called queens) to equal.

Do not think I am desirous of being accredited with laying anything new before my readers. What I have to say is not new, but is the result of thirty or forty years of study and careful observations of such men as G M. Doolittle, Dr. C. C. Miller, Henry Alley, and many other advanced apiculturists on both sides of the Atlantic. No one has a right to put forward as new methods with which he has experimented and made slight modifications of, but should give full credit to the originator of the idea, and I wish it to be clearly understood that although I have somewhat modified and altered the methods adopted by other bee-keepers, yet the ideas are not mine. Indeed, it is hard to say with whom they did originate, and as Mr. Doolittle says: "I cannot give credit to all from whom I have gained knowledge, as there is scarcely a writer on apiculture from whom I have not gained light, and, in fact, it is the many littles of the past that makes the much of the present."

Undoubtedly, the very worst method of rearing queens is the "let alone" method. The bee-keeper, if he wants first-class queens, must take some portion of the work into his own hands, and superintend the operations carried on by the bees within the hive. Take a hive that has just swarmed, for instance; on examination we find several cells in various stages, some just capped, others only partly completed. Then comes the important question, "What was the age of the larvæ when the first royal food was given the young grub?" The chances are it was too old for good results, for although bees build rudimentary cells prior to swarming, I *never saw* a queen lay an egg in one yet, and I should require to see her do it before I would state in print that she does so. The next question is, Do bees place eggs in embryo queen cells? They may, but I am more inclined to the view that it is the young grubs that are placed therein by the bees. Has it ever been recorded that these empty embryo queen-cells are the identical cells which are used eventually for raising queens? I think not. Often have I seen cells started prior to swarming, and have certainly seen these same cells still empty after the queen-cells on the other parts of the combs have been sealed. I am, therefore, of opinion that, though in a few cases eggs and larvæ may be transferred to these empty embryo cells, yet in the majority of cases the cells are built round the young larvæ, and in practically every case round larvæ over thirty-six hours old. Anyway, when the swarming fever takes possession of the bees it is accompanied by a complete mania for building queen-cells, and after careful examination of many stocks about to supersede the reigning queen I have found queen-cells built over larvæ of different ages. It therefore follows that cells built over the oldest larvæ will be the first to hatch out, and if the bees determine to throw no second swarm this half-formed insect becomes the mother of the colony. But if a second swarm comes off, the next hatching queen becomes mother. This second swarm should therefore always be returned; otherwise the colony is practically worthless for that season, and in any case the chances are that the most perfect queens, *i.e.*, those started from the youngest larvæ, and the last to hatch out, are always those destroyed. The theory of the survival of the fittest is thus in almost every case reversed. This is so vital a point that I must be forgiven for dwelling upon it, for, although bees at

swarming time will, if left alone, raise the finest of queens, yet in nearly every instance an inferior queen is the one that eventually reigns. It was the discovery of these facts, amongst others, that first led me to inquire more fully into the question of the quality of my queens, and endeavour to find a means of securing queens of the best quality, and produced under the best and most natural conditions. I obtained and perused the works of all the authorities on the subject, but, with the exception of the writings of the gentlemen I have mentioned above, there was no other writer whose methods were new, or in my estimation worthy of attention.—HENRY W. BRICE, *Thornton Heath, Surrey.*

(To be continued.)

PRESERVING SURPLUS QUEENS.

ADAPTATION OF THE "WELLS" DUMMY.

[2072.] Having tried the "Wells" hive for two years (1893-94), I am sorry to say I could not give a testimonial in its favour, always being unfortunate either with one or other of the queens dying or in other ways being lost; but in beekeeping the motto should always be *nil desperandum*, for, although unsuccessful once or twice, we should try again, as there are so many things that might happen with the most experienced beekeeper to cause either success or failure. If a success, tell it to your neighbours, so that they may also benefit; but if a failure pocket it and say nothing. But I rather think I am going from my text. Having failed so far to get a "Wells" hive to be even equal to the average of two ordinary hives, the idea struck me that the "Wells" dummy might be adapted for an ordinary hive to keep two queens through the winter, so had two boxes altered from one to two entrances with a solid division of 3 in. in the centre. In one of these I had a colony last winter, and when it swarmed this year I removed it some yards away, putting the swarm in its place (and had fifty-two sections off it). Then I at once put in a "Wells" dummy (home-made), and put a frame with a good queen-cell into each compartment, and also divided the alighting board with a piece of thin wood to give the young queens some chance of knowing the entrance they came out of; and on looking in about a fortnight or so after I was pleased to see plenty of eggs and larvæ in both divisions, showing that both young queens were present and breeding. Then, about three weeks ago, I divided other two hives with "Wells" dummies, and, after finding out which side had the queens, I introduced a nucleus with a young queen into each of the sides that had no queen, and, I am glad to say, all are breeding and doing well.

These double queens in an ordinary-sized hive cannot be left together long in the spring, but how very useful they may be for requeening in cases of accident to other queens, and if not required, they can either be sold, given to a neighbour, make an early nucleus, or destroyed, after helping to fill the hive bees and young brood.—*Baggrow, Cumberland.*

QUILTS *V.* WOOD COVERS.

[2073.] I read with interest Mr. W. B. Webster's letter in B. J. of September 6 (2062) on the subject of quilts *versus* wood covers, as we have been experimenting with wood covers for over four years. Our quilts, or rather I should say the fragments which the bees have left, are now in the Apiary Museum. We still keep a few quilts to put over condemned bees and swarms when we run the bees in over the frames; but in a few days these quilts are replaced by wood covers. A properly-made wood cover, in our opinion, is 99 per cent. better than any kind of quilt.

We wintered some twenty-four stocks last winter with wood covers, and they came out very strong in the spring. Our wood cover is made in three pieces—5½ in., 6 in., 5½. The 6 in. is the middle piece, which has a ¾ in. hole in it for the feeder, should it be required. Slats ⅝ in. by ¼ in. are nailed on to the three pieces to provide the bee-space over the frames. All our supers and section-crates have wood covers. The supers are 9 in. wide, and the wood cover made in two pieces, 5½ in. and 3½ in. The two side parts of the hive cover four parts of the super covers.

I am quite sure of this, that if properly-made wood covers are once used, quilts will never be used again. One great advantage is the tops of the frames are always clean and free from propolis. A wood cover renders a smoker unnecessary. A smoker has not once been used in our apiary this year.

If anything in the way of subjugating has to be done, we use a damp carbolic cloth. We find that our bees, through always meeting with kind treatment, do not resent the necessary interference, if only it be done at the right time.

The wood cover enables us during the honey harvest to take frames out and put empty ones in without subjugating the bees in any way. A slight lateral movement loosens the wood cover, which can then be taken off without irritating the bees, as the tearing off the quilt necessarily does.—R. T. SHEA, *Southend, September* 17.

BROOD IN SECTIONS.

DO BEES CARRY EGGS THROUGH EXCLUDER ZINC?

[2074.] On one of my hives I had a small crate containing twelve sections, all got filled and sealed, but in the centre of one I had a lot of drone grubs, about same quantity on each side of the comb. How did they get there if the workers had not taken them up? for, if the queen had got up would she have been content to lay fifty eggs and then quietly

go back through the excluding zinc? I think not. There is much conflicting correspondence on this point in your JOURNAL. With best wishes for its prosperity.—H. C. MARSH.

[We can only repeat our own conviction—formed from long experience—viz., that when eggs appear in quantity above excluder zinc it is a result of queen passing by some means into the surplus chamber. Diminutive queens have often been known to pass through excluder zinc.—EDS.]

FOUL BROODY HIVES.

THE CANADIAN METHOD.

[2075.] With reference to my letter (2054, p. 334) of BEE JOURNAL, August 23, Mr. Woodley finds fault in a friendly way with the heading of that letter. Now I have the greatest respect for Mr. Woodley, and always look forward for his "Notes by the Way," from which I have learned much; but I think it matters little what the method may be called providing it achieves its object. The Canadian or McEvoy method, as it appeared in the BEE JOURNAL, and recommended by Mr. Woodley, inspired and prompted me to operate on this hive as I have done. I may have perhaps deviated a little from the treatment as originally published, but circumstances alter cases. I wish to make it clear that the sulphur fumes could not in any way have caused the bees to leave the hive, because it was the skep from which the bees were driven that was exposed to the fumes, and said skep, or its contents, were not in any way brought into contact with the swarm afterwards. It will be remembered that the bees were hived in a frame-hive on "starters" of foundation, and at the end of the four days these starters were simply removed and full sheets of foundation substituted in the same hive without any disinfecting process of any kind; it was then, and not till then, the bees deserted the hive.

I performed a like operation on one of my frame hives (August 9, 1894) which I found to be badly affected with foul brood on removing a nice lot of finished sections. I shook the bees off the frames, and allowed them to run into a skep, where they remained while I prepared their hive. In this case I have combined another American plan with the McEvoy method by painting the inside of the hive with paraffin oil and setting it on fire, a handy way to remove the propolis, and perhaps disinfect the hive. Of course, there was no honey flow here on August 8; so I fed up the bees with good syrup medicated with naphthol beta. This stock has long since built out its full sheets of foundation, and stored sufficient food to winter on. Though the hive was treated as above stated, and the smell of the burnt oil quite perceptible, the bees gave me no trouble, as in the case of No. 1 hive.

I shall give another case, and the treatment is different to either of the above. It was a fine June swarm, belonging to a neighbour; he, unfortunately, hived it in a skep, from which the bees had died of foul brood in spring, leaving a large quantity of stores. About August 20 I drove the bees, and set them up in another skep the owner had procured. There were three or four nice slabs of comb built in this hive the present season, but the poor bees died of starvation. There was not, nor could be, any starters of foundation used in this case; the bees were set up direct on the combs mentioned above; neither is there naphthaline or naphthol beta used in this case. I am not prepared to state that all three are cured, or, in fact, any of them; but the brood in my own two hives looks healthy and well, as far as I am a judge; but the disease may be lurking in some corner undetected by me. I do not like probing or breaking the cappings of cells and perhaps destroying healthy brood. If any expert, either English or Irish, be travelling in this country, and is curious to see and examine for himself these hives, let him call to Piltown and inquire for "M. K., the man that has the bees," and I shall be happy, weather permitting, to afford him an opportunity of doing so, and would be more than pleased to know for certain that a cure had been effected. Failing some such examination, I cannot with certainty report of the success or failure of these cases sooner than April or May next, when the stocks will be rapidly increasing, if cured, or decreasing if still diseased.—M. K., *Piltown co. Kilkenny.*

Queries and Replies.

[1155.] *Bees Fighting.*—Will you kindly advise me on the following questions? I have a very good stock of Ligurian bees, which I have worked up by feeding from a three-frame nuclei, and they seem to be doing wonderfully well. I have noticed on frequent occasions that some of them seem to be having a fair old "go in," so to speak—fighting with each other. Two or three of them seem to go for one bee, and thoroughly "overhaul" him, and seem quite excited. Sometimes the whole four roll off the alighting-board on to the ground, when they generally disengage, and return to the hive entrance, there perhaps to "go for" another sister. They do not seem to kill each other. Sometimes I have noticed them "go for" a bee which has been out and returned with a load of honey. Therefore, what I would like to ask:—1. Is this fighting likely to seriously hinder the bees, or affect them in any way? 2. What do you think is the probable cause? How can I remedy it? 3. Would ants getting in the hive after the syrup, or large flies being on the alighting-board and near the entrance be likely to cause it (the fighting)?—H. S. L., *Ilford.*

REPLY.—The "fighting" is probably nothing more than the result of the bees having

to contend either with robber bees from other hives, or the annoyance from the "large flies" or ants referred to, and it has aroused their combativeness. No harm will follow.

[1156.] *Wintering Weak Lots of Bees in Cellar.*—Amongst others, I have three weak lots of bees (one single driven lot in bar-frame hive, and two small skeps); all three queens are now laying well; do not want to join them, as should like swarms next year. If I fed well and put them down in the cellar, would they winter so?—H. O. BOWREY, *Croydon, September* 12.

REPLY.—It is not at all probable that you would succeed in wintering small lots of bees by putting them down in the cellar after feeding up. They will stand a better chance outside if well fed and warmly packed by end of this month, supposing that the queens are young. Most bee-keepers would join up the two smallest, and make two stocks of the three weak lots of bees, but since you are averse to uniting, we should winter them singly as above. The fact that all three queens are now laying nicely, is a fair augury of the bees pulling through safely.

[1157.] *Settling a Dispute about Queens.*—A dispute having arisen between two of our bee-keepers (whom we will call A and B) as to the habits of bees with regard to their queens, I shall feel obliged if you will kindly say through your Journal which is correct:—A says "all queens must be bred in the royal cell," while B declares that "should the queen die outside or away from the hive no sucessor will be appointed and the hive will break up; but should death take place *in the hive* the bees will appoint one their queen, and that by isolation and special attention and feeding she soon assumes the queenly appearance."—CAMBUSLANG.

REPLY.—A is right and B wrong, as reference to any reliable book on bees would amply prove. Your friend B must surely be a skeppist bee-man; for we cannot conceive how any one—who uses bar-frame hives and possesses even the most elementary knowledge of the natural history of bees—could entertain such "legendary" notions of bees and their ways, as are conveyed by the views expressed above.

[1158.] *Granulation of Honey.*—Will you please say why some honey sets hard while some will remain in liquid condition for almost any length of time?—LOONIE, *Chester.*

REPLY.—It is quite beyond us to explain all the reasons for granulation and non-granulation of honey in a given time. That gathered from some flowers—notably from mustard—always granulates very quickly after being taken from the bees, but the season and the climatic conditions under which the gathering takes place have so great an influence on granulation as to upset all calculations. This year we know of honey in sections becoming solid within a fortnight after removal from the hives; while in most seasons the produce of the same district, at the same period of the year and apparently from the same varieties of flowers, will keep liquid for several months.

Echoes from the Hives.

Kitswell Farm, Dunster, Som., September 12.—I have a branch apiary down here on the beautiful Exmoor Hills, and I believe it to be one of the finest honey districts in England. Heather here now out in full bloom; not such a good crop known for years.—ERNEST A. S. COTTERELL, Hon. Sec. Bristol D. and N.S. and S.G. B.K.A.

Stamford Rivers, near Romford, Essex, September 12.—Bees have this year done badly in this part of Essex. Two swarms I had on Whitsunday have done best for me, storing about 40 lb. of surplus honey between them. Some of my swarms which came off the latter part of June and beginning of July got no honey at all, so I drove them and united the bees with two stocks in frame-hives and am now feeding them.—J. DOWNHAM (*The Essex Labourer*).

POLITICS IN A BEEHIVE.

Our Vienna correspondent writes:—A public accustomed to read of wars, rumours of wars, dynamite explosions, and railway collisions at its breakfast every morning, cannot be reasonably expected to grow excited over an item of intelligence that deals with such a tame subject as the busy bee. The only exciting and irritating point about a bee is its sting, and the only people likely to feel at all keenly on the subject are those who happen to be in the position of the lady thus described by the poet: "Her lips were red, and one was thin, Compared with that was next her chin; Some bee had stung it newly." And yet it would seem that there were still some possibilities unrealised before the latest meeting of the Austrian Horticultural and Apicultural Societies in Vienna, at the Bee Exhibition, which is still open to the public there. A discovery has been made there which is the talk of the capital at the present moment, and the truth of which is vouched for by hundreds and thousands of visitors, besides being duly attested in writing by thirteen trustworthy and competent witnesses, including members of the aristocracy, scientists, and physicians. And this discovery is of a nature to overthrow all the theories about the political constitution of bees which play such a prominent part in political and scientific literature.

Heretofore it was looked upon as an established fact, which could not be called in question by the most sceptical, that each community of bees was distinguished by its ultra-monarchical principles and its loyalty to one

queen. The members of the hive would never hear of a pretender, still less of a duumvirate or a triumvirate, and any attempt to bring about such a change in their political system would have produced a revolution. But the lawful queen herself would not allow things to go to any such extremes. The moment a rival presented herself she would, speaking figuratively, attack her tooth-and-nail, and the duel would end only in the death of one or both. "We have changed all that now," the Austrian bees seem to say to their human visitors. For Professor Gatter, of Simmering, has just exhibited a thriving hive, the members of which are governed conjointly by two queens, and the bees apparently approve the innovation. Nay, what is still more remarkable, the two monarchs get along most satisfactorily, and without the slightest friction. Not only are there no signs of rivalry, jealousy, or attempts at those feminine amenities which are the last resort of cultured females of the human race when compelled to endure each other's society, but the two queen-bees are positively affectionate — so affectionate, indeed, that one might be tempted to suspect that one of the two was a king in disguise, if such a hypothesis were not rendered absolutely untenable by the strongly accentuated physiological characteristics of the queen-bee. One of the greatest authorities on apiculture, Dr. Dzierzon, whose name is favourably known throughout the world in connection with several ingenious inventions for the comfort of bees, sat for hours at a stretch observing the conduct of the two queens. They approach each other from time to time without the slightest antipathy, and on two or three occasions actually caressed each other most tenderly, and then separated quietly and peacefully, followed by their devoted suite. Professor Gatter has just received the first prize for his sensational exhibit, which is attracting crowds to the Bee Show, and the members of the Apicultural and Horticultural Societies of Vienna are proud to think that no such extraordinary spectacle as this was ever witnessed or recorded in the history of bees. The document, drawn up, signed, and duly attested, will be preserved in one of the museums of Vienna, and copies of it will be sent to apicultural societies throughout the world.—*Daily Telegraph.*

WHY SWARMS BUILD IMPERFECT OR DRONE COMB IN BROOD-NEST.

Ten years ago I was led to believe that bees would store more surplus comb-honey if, under certain conditions, swarms were allowed to build their own combs in the brood-nest. Subsequent experiments proved the correctness of the theory. It might be well to remark, parenthetically, that Mr. R. L. Taylor conducted a series of experiments in this line during a period of three weeks in the summer of 1893, in which the swarms furnished with combs or foundation came out ahead of those building their own combs; but there is another point in connection with the matter to which there has not been attached sufficient importance—viz., that while the swarms building their own combs were outstripped in the beginning of the race, they soon began to gain upon their opponents, and continued to do so at an increasing speed to the end of the allotted time. I have always regretted that the test was not for a longer time—say twice three weeks, covering the whole of white clover and basswood bloom. I know that it is more profitable for me to hive swarms on starters only, when working for comb-honey. Briefly stated, I look at the matter something as follows:—

If given combs in the brood-nest, the first step of the bees is to fill them with honey. Having done this, there is a halt, a hesitancy in commencing and continuing work in the supers. The disposition of bees to do thus and so, to begin work or not in a new compartment, is a factor to which not enough attention has been paid. It is not always the most populous colony that stores the most surplus. I have seen a colony of less than average strength pile up super after super of honey, while another much stronger would do but little in the supers because the conditions were such that the bees "didn't feel like it;" perhaps they had in some way been "snubbed," and were "sulky" in consequence. I have heard it said that there is nothing in this; that, with the honey in the fields, it would be brought in and stored somewhere—if there was no room in the body of the hive it would go into the sections. I don't agree. Let me illustrate. I have sometimes been so fortunate as to have in the spring enough drawn, or partly drawn, combs in sections to enable me to furnish a part of my colonies with a full case each of such sections. Colonies so furnished begin storing honey in the sections at the very beginning of the harvest, and often have the first case filled with honey, and work begun in a second case filled with foundation, when colonies simply furnished with foundation in the first case are just beginning work in said case. Those clean, dry, empty combs just above the brood-nest are such a temptation to the bees that they just pitch in and fill them. This puts the bees in a mood to store their honey in the supers, and they keep on doing so. The colony thus early led to turn its energy superward is more likely to lay up a goodly store of surplus. But this is a digression.

If no combs are given in the brood-nest, and the supers of sections in all stages of completion are transferred from the old hive to that of the new swarm, the bees are compelled to begin storing honey in the supers; and where they begin, there will they continue.

Another advantage, although I consider it the least, of allowing the bees to build their

own combs is in saving the cost of foundation.

Of the many bee-keepers who have tried this system, I believe all, or nearly all, have secured more surplus honey as the result; the only objection to the plan being the exacting conditions necessary to secure the filling of the frames with perfect worker-comb. Some have even gone so far as to advocate the following of this system though it involved the sorting of the combs in the fall, and the rendering into wax of the imperfect ones. This is not necessary. For the past ten years the majority of my swarms have built their own combs, nearly all of the combs being perfect worker-combs, and but few words are needed to tell exactly how such combs may always be secured. Have young, prolific queens, and contract the brood-nest. That is all there is of it. So long as the queen keeps pace with the comb-builders, all goes well; but let them get the start of her, so that comb is being built to any great extent for the storing of honey, and at once a change is made to "store" (or drone) comb. If the brood-nest is too large, the first-laid eggs are likely to develop into bees that will emerge from their cells ere the brood-nest is completely filled with comb; and it is when the queen deserts the comb-builders to restock with eggs the centrally located cells that are being vacated, that drone comb is being built. I don't remember having seen a drone comb among the first built by a newly-hived swarm; it is the outer combs, built when the bees have outstripped the queen, or while she is refilling with eggs the ones first built, that contain the drone comb. The remedies are a queen so prolific that she can keep pace with the comb-builders, and contracting the brood-nest to such an extent that it will be filled with comb before the bees from the first-laid eggs emerge from the cells.

Bulged or crooked combs are also the result of a large brood-nest. The bees begin comb-building in the central frames. As a comb is completed, it is sometimes slightly bulged into the space between it and the adjoining outside frame—particularly so if the second frame contains no comb, or a comb that is not so far advanced as the one in the first frame. This causes the comb in the second frame to be bulged into the next outside frame, and so on with an increasing bulge as each succeeding frame is reached. When the last frame is reached, its space may be so encroached upon that perhaps no comb, or only a thin, misshapen one, may be built inside it. Proper and exact spacing will do much to overcome this state of affairs; but with a medium or small swarm in a large brood-nest, something of this kind may be looked for. A swarm a little below the average in size had been hived three days upon eight Langstroth frames, the bees also having access to and working in the supers. The central combs are half or two-thirds completed, while in the two outer frames work has only been commenced. Had "dummies" been put in at the sides, reducing the number of frames to five, all of the combs would have been commenced at the same time, advanced in growth at about the same rate, been finished nearly all alike, and there would have been no opportunity for bulging. A comb is never bulged when it is built between two others, the growth of which keeps pace with its own.

When I began the practice of hiving swarms upon starters in a contracted brood-nest, I was using the eight-frame Langstroth hive, putting "dummies" at the sides, and contracting to five frames; and I secured such straight worker-combs that those built upon foundation might almost look upon them with envy; but with the Heddon hive, unless the swarm is unusually large, such perfect results, especially in the one or two outer frames, are not secured. The trouble is that the brood-nest is compressed the wrong way. It is not the wrong way so far as work in the supers is concerned; it is superior in that respect, but it furnishes too large a surface at the top of the brood-nest; that is, there are too many frames in which to begin work. Reduce their number to five, and all of the combs will grow at the same time, and be perfect, as has been explained.

Keep young queens, and contract the brood-nest when hiving swarms on starters only, and there will be neither drone nor crooked combs; if this can't be done, then use full sheets of foundation, as permanent success is most certainly coupled with straight, perfect, all-worker combs in the brood-nest. — W. Z. Hutchinson, in *Gleanings*.

Bee Shows to Come.

October 9 to 12.—Dairy Show at the Agricultural Hall, London. Five classes for honey. Liberal prizes. For particulars apply to Wm. C. Young, Secretary, Dairy Farmers' Association, 191, Fleet-street, London, E.C. Entries closed.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

X. Y. Z. (Swansea).—Comb is badly affected with foul brood. Under the circumstances, and at this season, we should make no attempt to cure, but prevent further mischief by burning the bees and combs and disinfecting the hive.

A. B. (Stourbridge).—Sugar sent may be cane, but it is certainly coloured, as you say, to give it an attractive appearance. We cannot say that the colouring matter is harmful to bees, not knowing of what it consists.

B. PHILLIPS (Hanwell).—Beginners should, wherever possible, see the operation of uniting bees performed by one who knows how to do it, and how easily fighting is avoided, before trying it themselves. We can only suppose that the trouble was caused through want of experience in handling bees, as the method described is so generally successful that it was not thought necessary to mention sprinkling with scented syrup or dusting with flour in order to avoid fighting.

SIOAD (Salisbury).—*Uniting Hybrid Bees.*—Yes, hybrids unite just as do the ordinary native bee.

A. E. U. (Camphire).—Honey received is a very nice sample, good enough for showing anywhere.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

PURE ENGLISH BEES.—Swarm with Queen, 5s.; Queens, 3s. ALSFORD, Expert, Blandford. F 25

YOUNG Fertile Native QUEENS. A few for SALE, 2s. each. H. WITT, South Ascot, Berks. F 33

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

THE SIXTH YEAR. — Healthy Driven BEES, with Queen, 1s. 6d. per lb. Package free. Young Queens, 2s. each. HOLDER, Wimborne, Dorset. F 32

EXTRACTED ENGLISH HONEY in ½ CWTS, 6d. and 8d. per lb., tins free. Sample, 2d. Deposit. RICHARD DUTTON, Terling, Witham, Essex. F 23

BICYCLE, useful, WANTED. EXCHANGE BEES, fit for wintering. ALSFORD, Expert, Blandford. F 24

2 CWT. Sainfoin and Clover HONEY, splendid quality. What offers? T. PULLEN, Ramsbury, Hungerford. F 26

DRIVEN QUEENS (young), at 1s. 3d. each. Post free. R. BROWN, Flora Apiary, Somersham, Hunts. F 27

FOR SALE, 3 STOCKS of English BEES, in Bar-frame Hives. Apply, GEO. PARKER, 2, Bradley-street, Wotton-under-Edge. F 31

GOOD STOCKS of BEES for SALE, in substantial bar-frame hives. WALLACE, Cheadle Hulme, Cheshire. F 28

TWO GLASS SHOW CASES, each with 12 beautiful 1-lb. Sections; First and Second at local Show; 10s. 6d. each. ATKINSON, Hasland, Chesterfield. F 29

WANTED, SECTIONS of HONEYCOMB (first quality). Prompt cash; packages sent. Any quantity. E. HURST, Bexhill, Sussex. 235

FIVE STOCKS BEES in Skeps, 8s. each; Five on standard-frames (one broad-shouldered, four metal ends), 10s. 6d. each without hives; 15s. and 21s. with hives. Purchaser to pack and take away.—FREDK. S. FLETCHER, The Maples, Ottershaw, Chertsey. F 34.

BEES.—FOR SALE, four good STOCKS in Overton's bar frame hives, with section racks complete; two new this season with double racks. — GARDENER, Haven House, St. Mary Bourne, Andover, Hants. F.30

Prepaid Advertisements *(Continued)*

LACE PAPER for GLAZING SECTIONS. Three neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

FERTILE QUEENS, bred by selection, 5s. Very prolific. Ordinary Fertile Queens, 3s. 6d. Post free. Safe arrival guaranteed. Rev. C. BRERETON, Pulborough, Sussex.

FOR SALE, 4½ CWT. pure ENGLISH HONEY at 6d. per lb. Payment by deposit system. Address, C. M. EAGLETON, The Apiary, Parson Drove, Wisbech. F 9

FINE-TESTED 1894 FERTILE QUEENS, 3s. 6d. each. Safe arrival guaranteed. 3-frame nuclei, 10s. 6d. Packing included. Address, C. WHITING, Valley Apiary, Hundon, Clare, Suffolk. F 15

NOTICE.—CARBOLIC TOWEL, and Samples of my BEE-SMOKE CARTRIDGES Free (during Sept.) to all Purchasers of my CARBOLINE POMADE. T. HOLLIDAY.

INDISPENSABLE to HONEY DEALERS. — HARGRAVE'S Folding Cardboard BOXES for 1-lb. Sections. Sample 3d. post free. HARGRAVE, Harrogate-road, Ripon.

MARKET for SECTIONS, EXTRACTED HONEY and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

NOTICE.—I am Uniting a lot of late swarms, and shall have some young, healthy, natural-raised, '94 Fertile QUEENS for SALE at 2s. each. Can send by return post. A. J. CARTER, Billingshurst, Sussex. 243

CARBOLINE POMADE (Third Season).—Kills Bee-stings like Magic, and prevents the horrible smarting and burning inflammation. Prevents getting stung, robbing, &c. In 1s. bottles, post free. Samples of bee-smoke cartridges, 3d. T. HOLLIDAY, Astbury, Congleton.

TO HIVE MAKERS.

GOOD PINE PLANKS.

Largest Stock in London.

VERY DRY, SOUND, CHEAP.

For price lists, apply, COBBETT CO., Virginia-road Bethnal Green, London, E.

W. P. MEADOWS,

Syston, Leicester.

Unprecedented Success, ROYAL SHOW, Cambridge, 1894.

- 1st Prize—Collection of Appliances.
- 1st & 2nd Prize—Extractors.
- 1st Prize—Best Frame Hive.
- 1st ,, Best Cottager's Hive.
- 1st ,, Best Smoker.
- 1st ,, Best Feeder.
- 1st ,, Best Collection of Honey.
- B. B. K. A. Medal Super Clearer.

Send for Cat—a—Log with Leaflet.

MY LATEST PRODUCTION.—The "TILLEY" HIVE, made entirely on the principles laid down by Professor Tilley, and used in his extensive apiaries at Dorchester. The Tilley hive is no catch-penny article that the wind and rain will blow through, but is the cheapest, most substantial, and sensible hive now on the market, and when generally known is bound to be universally adopted. Note the price, 12s. 6d. complete. Painted three coats of best oil paint, and with zinc-covered roof. Every bee-keeper should send for my list.

RANDOLPH MEECH,
Broadwindsor, Dorset.

Editorial, Notices, &c.

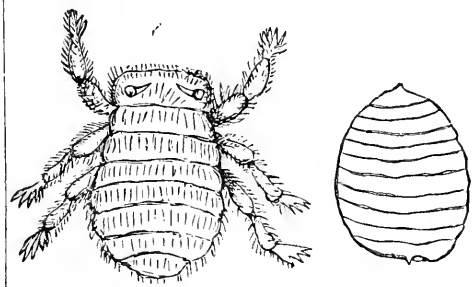
USEFUL HINTS.

WEATHER.—The last fortnight has been characterised by an almost general absence of sunshine in most parts of the kingdom. Here in the south a succession of dull, foggy days have kept the bees indoors, and, no doubt, preventing a good deal of robbing which otherwise would have resulted from the want of forage.

LATE AUTUMN FEEDING.—The cool weather and cessation of income has also pretty well stopped breeding in unfed hives, besides making it difficult—so we are told by correspondents—to get bees to take food down so rapidly as was desired. The main cause of this is giving the syrup cold, in spite of our repeated advice to the contrary. Readers should not overlook the fact that in so cool an autumn as this, a rapid-feeder, filled with a quart or two of warm syrup, is an attraction to the bees, by reason of the considerably higher temperature within the feeder itself. The warmth rouses the bees to activity, and causes them to take the food very fast, whereas, if the syrup is cold, the space within the feeder is cold also, and the effect of a low temperature on bees takes all the activity out of them. It is therefore in every way desirable at this late season to warm the food and to keep the feeding-place warm and cosy also. Bear in mind, too, that feeders should be filled after bees have ceased flying for the day.

BEE PARASITES.—Having had sent to us this autumn rather more than the usual number of "specimens" consisting of bees infested with the obnoxious little red vermin known as *braula cœca* or blind louse, it may be well to once more state that this parasite — of which so little seems to be known by many—is not indigenous to this country, and, luckily for British bee-keepers, it will not increase here, the climate being too humid for it to thrive or live long. It is usually brought to this country on the bodies of imported foreign bees, and, although it may increase during the summer season in the South, our winters are generally fatal to its continued existence. The parasite has a special partiality for the queen-bee, which is usually pestered by from four to ten of the active little creatures.

The accompanying illustration represents the parasite (much magnified, of course), in its perfect form and also in its undeveloped condition. Fumigation



with tobacco-smoke causes them to drop off the bees and combs, when they may be brushed from the floor-board and burnt. The floor-board should then be washed with diluted carbolic acid, and if this operation is repeated a few times the stock may be rid of the pest.

CLEANING UP WET COMBS AFTER EXTRACTING.—A correspondent asks if it would not be "a good dodge" to leave combs from which the contents have been extracted, "redolent of honey, and with a little of the honey left in the cells and so cause the bees to take to them more readily when put on next year," instead of having them cleaned dry by the bees before storing them away for future use? We have tried this "dodge" long ago, but the result was unsatisfactory. The honey left becomes solid and, as we think, helps rapid granulation in the honey stored afterwards in the same cells. No, we much prefer putting the combs away dry, and if a "bait" is needed it can be otherwise provided than as suggested.

Death of Mr. F. R. Cheshire.

We much regret to announce that the above-named gentleman died on the 16th inst. while undergoing an operation for a painful internal malady, from which he had suffered for some time. We here confine ourselves to notifying his decease, and tendering to his widow and family our warmest sympathy in their bereavement. We hope, however, to give some particulars regarding the deceased gentleman and his labours in connection with bee-keeping in our next issue.

HONEY SHOW AT CASTLE DOUGLAS.

The above popular annual honey show took place in connection with that of the Horticultural Society on the 6th inst. in the Townhall buildings, this year's exhibition proving a most successful one. The show of honey as a whole was a very good one, nearly all the exhibits staged being of excellent quality. The entries showed a decrease as compared with last year, particularly in the run honey classes, and due no doubt to the unfavourable season. The principal class, that for three 1-lb. jars of run or extracted honey other than heather, brought out about thirty competitors.

The prize exhibits—notably that which took first honours, which was perfect in every respect—were all most excellent, and the whole class an exceedingly good one.

The prize exhibits in the class for six 1-lb. sections were also of very high excellence, though some competitors were thrown out for want of a little more tidiness in the get up. The whole of the exhibits in the class for large supers were practically faultless.

The Rev. R. McClelland, who officiated as judge, suggested that classes for beeswax might be instituted, as well as a special class for cottagers. He also thought that the recognition of the honey industry by the County Council would effect much good in the district.

The arrangements were of the usual complete character associated with the Castle Douglas show, a result due to the unflagging exertions of the officials. Special mention should be made of the services of Mr. Myers, who discharged the duties of secretary, and other officials rendered valuable assistance.

PRIZE LIST.

Three 1-lb. Jars Extracted Honey, other than Heather.—1st, W. Blackwood, Castle Douglas; 2nd, Messrs. Ross & Kerr, Dumfries; 3rd, John Ramsay, Hurlford; h.c., Robt. Dodd, Cheshire; c., Rev. E. Charley, Cheshire.

Six 1-lb. Sections.—1st, W. Hogg, Castle Douglas; 2nd, Messrs. Ross & Kerr, Dumfries; 3rd, J. Learmont, Balmaghie; h.c., James Bone, Halmyre; c., John Seldon, Umberleigh.

Best Super.—1st and 2nd, W. Hogg; 3rd, Messrs. Ross & Kerr.

Super under 12 lb.—1st and 2nd, W. Hogg; 3rd, J. Learmont.

Dropped Heather Honey.—1st, Messrs. Ross & Kerr.

Six 2-lb. Jars Dropped Honey.—1st, W. Hogg; 2nd, Messrs. Ross & Kerr; h.c., Wm. Callander; c., S. M'Murray, Gelston.

Six 1-lb. Jars Dropped Honey.—1st, Messrs. Ross & Kerr; 2nd, Jas. Johnstone, High Park; h.c., Jas. Learmont; c., W. Hogg.

Three 1-lb. Sections.—1st, W. Rogerson, Dumfries; 2nd, John M'Quarrie; h.c., John Wilson, Burnside, Crossmichael; c., R. M'Gowan, Bridge-of-Dee.

Three 1-lb. Clear Glass Jars.—1st, W. Rogerson; 2nd and c., Thos. Myers; h.c, W. Callander, Clarebrand.—(*Communicated.*)

ROXBURGHSHIRE BEE-KEEPERS' ASSOCIATION.

The annual show of this association, which came into existence a few years ago, was held in the Corn Exchange, Jedburgh, on Saturday, the 15th inst. In extent the show corresponded nearly with that of last year. Clover honey was shown in large quantity, and the quality was very good. This may also be said of extracted honey, which was all of the clover kind. There was a poor show of heather honey, which is scarce this year. Granulated honey generally was very fair, and one or two lots were extremely good. A number of good cakes of wax were exhibited. It is characteristic of the season that only one wasp byke was shown, and it was so small that it received only a second prize. Silver medals given by Lady Gibson Carmichael were awarded for the best collection of honey and best observatory hive; and the Highland and Agricultural Society's two silver medals were the first prizes for collection of appliances and 1-lb. sections of clover honey. The Marquis of Lothian and Lord Stratheden and Campbell were among the visitors. The judges were:—Messrs. Christopher Chouler, Dalkeith Park; and John Wishart, secretary of the Scottish Bee-keepers' Association. The awards were as follows:—

Collection of Honey, not exceeding 100 lb.—1st, Thomas Clark, Pleasants; 2nd, James Whellans, Camptown.

Observatory Hive, with Bees.—1st, George Cumming, Langholm; 2nd, Dr. Fyfe, Jedburgh.

Collection of Appliances. — 1st, George Cumming.

Best Twelve 1-lb. Sections.—1st, Harry Wood, Lichfield; 2nd, George Ormiston, Knowesouth.

Neatest Design in Honey (open).—1st, Harry Wood.

Best Hive, cost not above 20s.—1st, Nichol Dodds, Melrose; 2nd, J. Cranston, Jedburgh.

Six 1-lb. Jars Granulated Honey.—1st, Dr. Blair, Jedburgh.

Beeswax.—1st, George Ormiston.

Best 1-lb. Section Clover, 1-lb. Section Heather, 1-lb. Jar Clover, and 1-lb. Jar Heather Honey. — 1st, Adam Oliver, Jedburgh.

COUNTY PRIZES.

Super of Clover Honey.—1st, James Whellans; 2nd, James Veitch, Inchbonny.

Super of Heather Honey, any Weight.—Thomas Ord, Falside.

Six 1-lb. Sections.—1st, James Whellans; 2nd, George Wilson, Kelso.

Six 2-lb. Sections.—1st and 2nd, Robert Millar, Jedburgh.

Twelve 1-*lb. Sections Heather Honey.*—1st, Thomas Clark.

Six 1-*lb. Sections Heather Honey.*—1st, James Veitch.

Bar-Frame of Honey.—1st, James Kerr, Birkinside ; 2nd, Dr. Fyfe.

Super (non-sectional), any Weight.—1st, Walter Oliver, Jedburgh; 2nd, Thomas Clark.

Super, 7 *lb. to* 10 *lb.*—1st, Thomas Maben, Jedburgh ; 2nd, James Whellans.

Super Heather Honey, 7 *lb. to* 10 *lb.*—1st, James Whellans.

Super not under 10 *lb.*—1st, James Whellans.

Six 1-*lb. Jars Extracted Honey.*—1st, H. Wood ; 2nd, William Marr, Jedburgh.

Six 1-*lb. Jars Extracted Honey.*—1st, H. Wood ; 2nd, Alexander Anderson, Minto.

6 *lb. Extracted Honey.*—1st, Thomas Clark ; 2nd, Alexander Anderson.

Beeswax. — 1st, George Ormiston ; 2nd, William Marr.

Wasp Byke.—2nd, William Sinton, Jedburgh. No 1st awarded.

Invention in Bee-keeping.—Dr. Fyfe.

(*Communicated*)

PROFIT AND PLEASURE IN BEE-KEEPING.

"Something to add to the happiness, comfort, and value of country life is always found in bee-keeping. Happiness, because one cannot help but be happy while with the bees, unless stung by them, and our modern bee-keeper receives very few stings. Comfort, because an hour spent with the bees always has an invigorating effect on mind and body. Value, because not one country home in twenty is supplied with that most delicious of all sweets—honey. Honey, as both food and medicine, is outrivalled by nothing that can be produced in the country. And bee-keeping adds happiness, comfort, and value to those interested therein, because broader views, grander hopes, and higher aspirations always come to such, and they are led to look from the created things to the great Creator of all things, and thus led to a higher life."

BEES IN A SIGNAL-BOX.

Some little inconvenience has been caused at one of the signals near Kettering Station during the past few days by the appearance of a swarm of bees. On Friday evening, when one of the porters ascended the ladder to the signals near the South Box, he found he could not put his lamp in the proper place, and on examining the signal-case (where the lamp is placed) he found that a swarm of bees was located there. Later in the evening the lamp was put in its place, but on Saturday the bees put out the light. — *Northampton Daily Chronicle.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[2076.] After nearly a week of dull, sunless weather, reminding one of November rather than September, we have had a heavy rain which has cleared the fog and allowed Old Sol to show his face again. The bright sunshine to-day brought out the bees as though the time of swarming was with us again, and a few were visiting the watering-places, showing that breeding was going on in some hives at least. On going through part of the apiary last week I found a total absence of brood in many hives; in one I found an unfertilised queen, her eggs hatching into drones ; this, of course, was remedied by adding a nucleus lot from my out-apiary, first deposing the uncrowned queen.

Feeding up for winter should be attended to as soon as possible. Where it has not been already done, the feeding will probably induce breeding, and eggs deposited in September will hatch out in time to get a flight in St. Luke's little summer—about October 20 to 25—and go into winter-quarters, more likely to be of service to the stock another spring than bees that hatch out late in October or November, when chances of cleansing flight may be few and far between.

In reply to your correspondent (2,068, p. 365), I would recommend "R. A. S." to get a super clearer from Mr. Flood, Reading. These clearers are fitted with Porter escapes, and are so neatly and strongly made that they are useful in many ways—1st, as a super clearer ; 2nd, as a platform on which to stand your extracted box of combs for the bees to clean up the dripping remnants after extracting. Take out the escape, place your board on the frames or on the quilt with the central feed-hole open, and the bees can come up through the hole, and after the combs are cleaned up will return to brood-combs ; 3rd, it makes a good tray on which to stand sections ; 4th, it is useful as a foundation or tray on which to stand a number of crates. When using it in the apiary I take a stool—a light empty bottle-crate answers well—place my

super clearer on the stool or crate, then shake out my carbolised cloth, and let it drop in between the front of the hive and the section-crate. Holding the two corners in between the second and third fingers, I now grasp the crate of sections and lift them off towards me as I stand at the back of the hive and allow the carbolised cloth to fall and cover the frames or the bottom super, as the case may be. If the job is done adroitly the cloth completely covers the bees, while a continued swing lands the crate of sections on the "clearer." The cloth is then taken off the frames and dropped on one side, while the "clearer" and its load are returned to the frames before the bees have time to recover from their surprise. Referring to the difficulty of removing supers, I have little of those troubles now. 1st. I use broad-shouldered frames which are perfectly level at the top. 2nd. I scrape all propolis or brace combs off the tops of frames before supering. 3rd. I have my crates all of one size to hold twenty-one sections, the three rows of sections standing on slats of wood a quarter of an inch thick; and, 4thly, I usually work with more than one crate on the hive at one time, therefore my full crates have been detached once before their final move to storeroom. If I should have one that is fixed very tight by the bees, I would prise it loose with a screw-driver or strong pocket-knife after everything was ready for its removal, or perhaps it would be as well if the loosening was done a few hours previously.

I do not get any "rush-out" of angry bees when working, and rarely smoke an entrance before overhauling a hive, never when the bees are in a normal condition.

I cannot coincide with our Dorset friend's (6,070) views that a large bell glass is *all* that is necessary to keep sections clean till they reach the consumer—but please don't think that I am, or wishing to grind my own axe in this matter—my aim for several years past has been to educate our brethren in the craft in the most cleanly and the most economical method of putting up comb honey in a marketable form and, notwithstanding the many devices in the shape of section holders, I have not seen the holder yet that surpasses the two squares of glass attached to the section with strips of clean lace-edged paper. This method—if the paper is attached with thin glue, which fills the pores of the paper—practically seals the honey, and renders it impervious to dust, dirt, fumes from gas, and, to a great extent, from damp. Tin cases answer very nicely, but unfortunately add 2d. to the cost of each section of honey, which either the producer has to lose or the consumer pay for, thus enhancing the price of our commodity, and making it more of a luxury, or else reducing the profitableness of its production below the old-fashioned strained honey of the straw skeppist.

I gather, from the editorial footnote, that our friend "Competition" (2070, p. 365) would like our craft and its productions noticed in the press. Quite recently the *D. T.* had an article on two queens in one hive, or the dual authority, and I notice in this week's *Christian World* a quotation from the *Times*, wherein it is stated that a farmer could easily manage thirty hives of bees with his other work, and make a profit of 50s. per hive—so that evidently our ranks will be swelled in the near future by the many down-grade farmers who will wish to stem the tide, even if it be with a small bee-farm. But, dear friend "Competition," how shall we—who have a struggle to make both ends meet now—fare then, when competition must be keener still? —W. Woodley, *Beedon, Newbury.*

QUEEN-REARING.

THE RESULT OF THREE YEARS' EXPERIMENTAL WORK.

[*Continued from page* 375.]

[2077.] Many people have written on this subject of queen-rearing, but their plans are either those of the gentlemen already named, or some modification thereof, or they were troublesome and unsatisfactory. I have tried them all exhaustively, and under all conditions, and for experimental purposes have raised queens only to destroy many of them at different stages of their growth to see practically what they were made of, and to set at rest some point on which I desired to satisfy myself.

Henry Alley, now over thirty years ago, was the first to point out that the then methods of raising queens were not satisfactory, and gave the bee world a new system of doing so by cutting worker-cells containing eggs and very young larvæ, and giving same to queenless stocks having no unsealed brood to raise queens from. This was a marked step in advance, quickly followed by others on the same lines, and, after careful experiment, I am bound to say good queens can be raised by his method. Dr. C. C. Miller was, I believe, the first to suggest the transference of eggs and larvæ to naturally-built embryo queen-cells, but it was reserved to Mr. Doolittle to perfect the method which has proved, in the hands of others as well as mine, to be most satisfactory, and to produce the finest results. It is his method—with some slight modifications of my own—that I propose to lay before your readers. No doubt it entails a lot of work, and requires an amount of care which, to some minds, may seem unnecessary with so small an object in view as the raising of a queen-bee, but when we consider what may be the result of working out a plan by which a superior race of so useful an insect as the honey bee may be obtained, it is, to my mind, worth twenty times the trouble and care required. It must also be borne in mind that once the routine of the work is learnt, and the requirements fully grasped, it comes as easy to carry out the

necessary manipulations as the ordinary handling of a bar-frame hive. If the eyesight be good and the fingers deft, the task becomes easy, and, to me, all-absorbing. It is certain that when our advancing bee-keepers have tested the qualities of the queens raised by scientific methods, they will abandon rule of thumb queens thenceforth.

In carrying out the work about to be described, I have largely had to take into account the difference in the climate of this country and of America, and the uncertain character of the weather here during the swarming season, which, as we know to our cost, is often very bad. The difference must also be noted in the date of harvesting here and there, besides the length of the honey-flow, &c. In this way we must watch for the time when the bees first evince a desire to supersede their queen, and, above all things, to be ready to take full advantage of this desire at once, for should the weather suddenly change for the worse, and the honey-flow stop, steps must be taken to preserve queens in process of being raised, by giving the bees an equivalent to the bountiful supply they were enjoying, or our beautiful queen-cells, queens, and all, will disappear as if by magic, and nothing but a bare stick will be left.

In beginning the practical work of queen-raising, the first necessary is a full colony of bees, with super on over excluder zinc, and having a laying queen below, bees working hard in super, honey coming in fast, and drones on the wing. These conditions fulfilled, all is ready for a start by preparing your frame, to which the artificial cups are fixed beforehand. If the supers used are shallow-frame ones, a shallow frame is prepared; if the standard size is adopted, use a standard frame of comb free from brood; or a frame of foundation may be used, though I prefer a built-out comb with a little honey in it. Cut the comb in half horizontally, remove the lower half, then take an ordinary top bar of a frame and cut it so as to fit between the side bars of the frame, close up to underside of the cut comb. Fix it in its place with a $\frac{3}{4}$ in. brad at each end, then take the portion of comb removed and cut a piece out of the centre along the now top edge 7 in. long and $1\frac{1}{2}$ in. deep; fix the half-comb so cut back under the inserted bar, so as to leave room in the centre for the cells to be built down; or, if preferred, the original comb may be cut so that the bar is made to fit in and take out, and so save removing any comb except that portion which is necessary to give room for the bar to fit in, and the cells extended downwards. Mr. Doolittle prefers the latter plan, but, using as I do the shallow frame, I prefer the fixed centre bar, with an easily removable bottom bar.

The next operation is to prepare the wax cups. Here again I have slightly departed from the Doolittle plan, because I have succeeded better by so doing. Take a few ounces of pure beeswax that has never been overheated; place same in a small but deep tin vessel (a small milk-can will do if clean), add 2 oz. of distilled water and a pinch of salt; heat slowly until the wax is all melted, but keep the temperature as low as possible. It will, however, be necessary to have your "dippers" ready beforehand. And now comes the question of size. This caused me considerable delay, and only after careful observation did I find that the bees were not so particular on this point as myself, provided the cells were not made too large nor too small. By careful measurement I found that the interior of natural embryo queen-cells were very nearly the same size as ordinary drone-cells (new), but they must not be much larger; if they are the bees will build a division in the centre and spoil them by making two of one. On the other hand, if the cells are made much smaller they will remove them altogether. But some of your readers will probably say, "Bees transform ordinary worker-cells into queen-cells." True, but if you watched the process you would find that long before the grub is inconvenienced by the smallness of the cell the bees have enlarged the mouth thereof and extended the same so as to make a three-part formed queen-cell of it on the top of what remains of the worker-cell. By watching still more closely we find that the young grub is completely floated out of the worker-cell, and its fast-growing little form soon fills the royal compartment, the upper part of the chamber (*i.e.*, the worker-cell portion) becoming the store-house for the abundant food supplied at this stage. What is required, therefore, is a small rounded stick made to fit nicely into an ordinary drone-cell. Having prepared such a stick, take a sharp knife and so cut the dipping end that the base of the cell when formed is what is known as a natural base; three upward cuts on the end of the "dipper" will do this. It may be another fancy of mine, perhaps, but I find in using cups made on cell-formers so cut that the royal food when placed therein with the young grub on top is held much better in position than if the cell is flat-bottomed; for should the weather be warm, and consequently a very high temperature within the hive when the cells are given, the food liquefies, and the weight of the larva causes it to slip from its position and come sliding down the side of the cell. When this happens, it is promptly removed by the bees, for such a state of affairs never comes about in nature. It is best to make two or three "dippers" at first; by doing so much time is saved in not having to wait while the wax on one dipper sets, but going on with another or two while the first is cooling, and so on alternately. Now place the dipping ends of your "formers" or dippers in a little salt and water, that they may get thoroughly wet; this helps to facilitate removal of the artificial queen-cells when made.

Having everything in readiness for this part

of the operation, we commence making our cells by dipping each "former" alternately in the heated wax, making the first dip the deepest. I dip mine five-eighths of an inch the first time, and a little less every time afterwards. The dipping continues until the wax-cell and dipper together very much resemble a large fusee-match. The cell cups are then set to cool, when they can be removed with a little care. I have experimented with cells made deeper, and with others not so deep, as mentioned above, but find the depth stated to be the best.—HENRY W. BRICE, *Thornton Heath, Surrey.*

(*To be Continued.*)

Queries and Replies.

[1159.] *Suspected Queenlessness.*—I always read your paper with great interest, and you have kindly replied to some questions. Now I would ask you if colonies are likely to be queenless if the bees are carrying in pollen? Mr. W. Woodley says:—"If there are many bees on the alighting-board, look out for queenlessness." The two sides of a "Wells" hive have had the alighting-board crowded. I was going to buy queens, when to-day I see the bees carrying in pollen. I could not see any brood in yesterday, but I am quite a beginner and might miss it.—ENQUIRER, *Hull, September* 21.

REPLY.—There are other reasons why bees crowd about entrances in autumn besides the one referred to, and Mr. Woodley's remark: "look out for queenlessness" is obviously intended as nothing beyond advising that an examination of the combs should be made to make sure that the queen is safe. In the same way, to observe bees carrying in pollen is usually taken as a sign that breeding is going on in the hive, but there are exceptions to this rule, and, in any case, before buying queens the combs should be carefully examined before concluding that a hive is queenless.

[1160.] *Doubling and Storifying.*—Will you kindly enlighten me on the following points?—1. Is the "W. B. C." hive suitable for storifying for extracted honey, according to method illustrated in Cowan's "Guide Book," with three standard bodies? 2. Can a prolific queen fill the twenty frames of the two bottom bodies (when working on above system), and are the workers able to rear this mass of brood, so as to have the stock ready to gather clover honey to advantage? 3. Which of the following plans of storifying do you recommend?—(*a*) Tiering up with boxes of shallow-frames on one standard brood box; or (*b*) using three standard boxes, keeping the top one for extraction, and allowing the queen access to the two bottom ones? 4. Which plan, all conditions being equal, do you think best—doubling or storifying? Should be much obliged by your answers to above, as I don't wish to make a wrong start.—A. B. C., *Rugby, September* 22.

REPLY.—1. Yes. It is merely a question of providing additional "lifts" to raise the roof, and so cover whatever brood and surplus-chambers are used in storifying. 2. Some queens are so prolific as to need nearly double the number of frames which keep ordinary queens fully occupied, but the question of how many brood-frames may be used with advantage is largely one of district and duration of the honey flow therein. Regarding the plan of doubling and storifying, as dealt with in "Guide Book," it is dealt with as described, and in a good district and with proper management yields excellent results, but it is not so suitable to places where the honey flow is less abundant. 3. Reply to second query covers this, but as to choice of plans a good deal depends on the bee-keeper himself, and his aptitude for the carrying of them out successfully. For the ordinary bee-keeper, and the ordinary district, we think the first-named one (*a*) most likely to succeed.

[1161.] *Late Autumn Feeding.*—Many thanks for reply to my query (1141) of August 30 issue. I have followed instructions as to feeding, and, up to the present, the stocks have had about 11 lb. of Demerara sugar each (made into syrup) in addition to a half-filled frame, taken from other hives. When I commenced feeding rapidly they took about a quart of syrup each in the twenty-four hours, but are now only taking it very slowly. The difficulty you anticipated in the completion of the combs already presents itself, as I find they are being built out very unevenly and chiefly of drone cells, consequent upon rapid feeding, I suppose. I therefore ask:—1. How long shall I continue to feed? 2. If you think it advisable, how and when shall I replace the uneven combs? 3. I noticed several wax-builders entering and leaving the hives (with wax pockets quite full) as ordinary honey gatherers do. Can you account for this? 4. Drone brood has been cast out from a well-stored and fairly strong hive. Is this consequent upon the slaughter of drones?—INQUIRER, *Staffs., September* 22.

REPLY.—1. Each stock should store 20 lb. of syrup for wintering on. Refer to "Useful Hints" in this issue. 2. Not until warm weather in spring. 3. Only by the rapid feeding. 4. We presume you refer to what has happened some time ago. There will be no drone brood in strong hives at this season if its condition is right. But when drones are cast out the drone brood suffers also.

[1162.] *Candy Making.*—I should be greatly obliged if you would insert a recipe for soft candy in the BEE JOURNAL. I forget the ingredients, but one I have used, and found most excellent, was made by boiling the mate-

rials and cooling before pouring out by standing in a bucket of water.—CHARLES E. COCKIN, *Etton Rectory, Hull, September* 22.

REPLY.—Mr. Wm. Woodley's method of making soft candy is as follows:—"Into a large copper-bottomed saucepan put three imperial pints of boiling water, then add gradually 17 lb. of pure Demerara crystallised sugar, into which one and a half teaspoonfuls of cream of tartar has been mixed; stir well till all the sugar is dissolved, then allow it to boil ten to fifteen minutes. Now stand the saucepan of syrup in a vessel of cold water, and stir briskly until it gets of a thick, creamy consistency. A little salt may be added, if desired, just before it is removed from the fire; and naphthol beta, dissolved in spirits of wine, may be added in proper proportions when the stirring begins after the syrup is taken off the fire. These proportions will prove right *every time*, and the candy will be neither too hard nor too soft."

[1163.] *A Very Homely "Nondescript."*—In taking off a super from one of my hives I discovered a nondescript, which I suppose to be a spider, having much web about him. He is a very gay fellow, and somewhat of a gourmand, for he had killed and eaten a great many bees, leaving the skeletons at the corner outside the quilt, where I caught him. He is as round as a top. I have never seen one of his kind before. Having the work of C. French on the various insects of Victoria, I searched to find him, but could not discover him. I should feel an interest to know something of his character, therefore have enclosed him—I hope in a safe conveyance—not doubting but that you will know him at first sight, but I do not wish to have any of his destructive breed. In the super I took off I found nothing in it—not swarmed this year—and I fear he is the culprit that has prevented them from storing any surplus honey. Leaving him now in your hands to take care of, I subscribe myself—A SUFFERER, G. R., *Diss.*

REPLY.—The insect sent is the common diadem spider, one of our most common spiders. It has no doubt been very destructive to the bees, as it feeds on flying insects that it entraps in its web.

[1164.] I bought recently a first-class "Wells" Hive. When it came it was put together as follows:—Shallow frames, wired foundation below; standard frames with ditto next above; section crates above that; zinc excluder over standard frames. Without seeking expert advice I drove two strong stocks from skeps into my shallow frames, one at a time, of course, and divided down middle. I then started feeding and covered up, putting deep frames and supers away, also zinc excluders, for winter. The bees cover and crowd all their foundation except one bar at each end, and are rapidly filling and sealing stores. The point is this: When spring comes would you put the zinc excluder over the shallow brood, or would you put on the twenty frames (deep ones) two or three at once, as Mr. Wells particularly advises, and the excluder above these? If the latter method is adopted I shall only get sections filled, I suppose; because, don't you think, the deep frames would have a little brood over all of them? I would much prefer sections to frames if I can get a due proportion commensurate to cost of hive and bees.—B. WALKER, *Kirkby-Stephen, September* 21.

REPLY.—Before replying to above we should know what form of "Wells" hive is referred to, and the number of frames in each chamber. But whatever form of "Wells" is used, it was surely a mistake to hive the bees on shallow combs. If further particulars are sent we will endeavour to deal with the matter.

[1165.] *Suspected Queenlessness.*—A stock swarmed on July 31, and threw off a cast twelve days later, which I put back after destroying queen-cells in parent hive. Does the presence of drones in parent hive at this time of the year mean that the hive is queenless? I have examined them, and though they have fairly good stores, I fail to find any sealed brood—the queen herself might easily escape my inexperienced eye. Please say if above are certain signs that the hive is queenless, and if I should introduce a fertile queen at once?—T. HARDMAN, *Marple Bridge.*

REPLY.—The presence of drones in a swarmed hive at this season points almost with certainty to queenlessness.

SEASONABLE QUESTIONS.

ANSWERED BY G. M. DOOLITTLE.

Enamelled Cloth Covering for Bees.

Question.—Is it a good plan to use enamelled covering over the brood-frames in winter? If bees need water in summer, why do they not need it in winter also? And with the enamelled cloth over the frames they have water in winter as well as in summer.

Answer.—This is quite ingenious, to say the least; and if I really believed that bees needed water while in winter quarters I might be persuaded to try enamelled cloth for that purpose, as it would be much easier supplying water in that way than by giving it them in a sponge at the entrance, as has been recommended so many times, where bees were in the cellar. But bees use water only when breeding rapidly; and as winter breeding is poor economy, and something I do not wish, I do not care to supply that which brings on what is a damage to me, for I believe winter breeding to be a damage to any bee-keeper residing at the north. I have tried enamelled cloth several times over the cluster of bees during winter, and in every case where tried those colonies did not come out nearly as

strong as did those with absorbents over them; while many colonies, in proportion to those so tried, died, or were so weak as to be nearly worthless. Some seemed to like enamelled cloth over the bees in winter; but with me the moisture arising from the bees condenses in drops on the cloth,and when these drops become so large that they fail to hold to the cloth they drop down on the bees, thus keeping them damp and in a condition not suitable to their wintering in the most perfect order. Enamelled cloth for bee-quilts would never have been thought of, in my opinion, were it not for its non-sticking character—that is, a sheet of enamelled cloth will not be glued down by the bees so, but that it readily cleaves from the top of the hive by a little lifting by one corner. This makes it desirable where a hive is to be opened often, as in the case of queen-rearing or an experimental hive.

Brood in Sections.

Question.—What is the cause of bees filling the sections with brood, and drone brood at that? What is the remedy for it? I put on one case of sections some time ago, thinking that the bees were crowded for room, and perhaps would be forced to swarm when there was no bloom to sustain swarms, and I find the above result. Would you destroy the drone comb, or shave off the heads of the drones in the cells? Please answer through your "Seasonable Question" department in *Gleanings.*

Answer.—The querist seems the more surprised that the brood found in the sections was drone brood, while if I should find any but drone brood in sections I should be as surprised as he; for I have yet to see worker brood in sections, unless the colony was a new swarm and commenced housekeeping upstairs, as is sometimes the case, where sections filled with foundation are placed on the hive when the swarm is hived, with nothing but starters or empty frames below. Where swarms are hived on empty frames the sections should not be put on till the bees get well started at comb-building below—say in three or four days after the swarm is hived. But where empty combs or frames filled with comb foundation are used below, then the sections can be put on at time of hiving the swarm if wished. But as to the cause of the drone brood in the sections, if, as is usually the case with most bee-keepers of the present time, the questioner had restricted the drone comb below, the natural consequence would be drone brood in the sections, if the bees were allowed to build their combs in the sections without the use of foundation, and especially so with a light flow of honey and plenty of pollen; for at such times the bees rear large quantities of brood, and prepare for swarming by starting as much drone brood as is possible, the same being limited only by the amount of drone comb the queen has access to. I gave up the idea long ago of having hives absolutely free from drone comb; and if I were to be called to choose between no drone comb in a hive, or one full frame of the same, I should say the full frame; for the bees will have some drones any way, and I should prefer a full frame of drone comb, placed in a certain position in each hive, to having a little patch of drones here and there all through the combs and in the sections; for then I know just where all the drone brood in each hive is, and can manipulate it just as I wish. Don't understand, however, that it is necessary to have a full frame of drone comb in each hive; for where I have things just as I wish them, I allow about one-fourth of a frameful to each hive, bnt have that all in one frame, and the frame having said drone comb in it in a certain place in each and every hive in the apiary. Wandering a little.

If I am willing that all colonies should produce drones, no further attention is paid to this drone comb during the season; but if I do not wish certain colonies to have any flying drones, then I open these hives at the side where this frame having drone comb is every twenty-one days; take out the frame and shave off the heads of all the drone brood, using the same knife which I use in uncapping combs while extracting honey for the purpose. I have found this plan to be more economical and less troublesome to the bees than the use of drone-traps, or, in fact, any other method advocated for keeping down undesirable drones in an apiary. Having given the cause of drone brood in the sections, we will proceed to the remedy.

There are two ways to remedy this matter; and the one which I use most is the filling of the sections with very light section foundation. This keeps all drone comb out of the sections; and where there is no drone comb there will be no drone brood, providing we have a good prolific queen; consequently this trouble with brood in the sections is remedied by thus using sections full of foundation having the worker size of cells. Wandering again.

By thus using sections filled with worker foundation, we have very much nicer section honey as to appearance, after the sections are finished by the bees; for the capped combs having the worker size of cells are much more beautiful than are those of the drone size of cells, as all who have compared the two side by side are free to admit. Besides this, we have none of that wavy or washboard appearance in the combs of honey, which we often have where the bees are allowed to build the combs in the sections, as the bees start on the whole surface of the foundation in the sections at once, and thus bring the whole out "bodily," as it were, so that the slackening or increase of the honey-flow does not result in the shortening and lengthening of the cells, as is the case where the combs are built entirely by the bees, especially where black and hybrid bees are used.

The other plan of keeping the queen from

the sections is by the use of a queen-excluding honey-board between the sections and the brood-chamber. This will effectually prevent brood in the sections ; but such honey-boards are expensive, both in time of putting on and taking from the hive ; room for storage when not on the hives, and in the money used in their purchase ; or of material from which to make ; while they do not do away with the undesirable looks of the finished product in the sections, unless the sections are filled with foundation ; and many claim that they should not be used in any event, on account of their lessening the amount of our honey-crop on account of the bees being loath to pass freely through the perforated metal. Regarding this latter claim I have my doubts, but consider all of the others as important.

Having given the remedy, what shall be done where we find brood in the sections before we knew of or have applied the remedy or preventive ? This all depends upon what stage the brood is in when we find it. If it is found before the brood is sealed over, we have little waste except our time in taking the sections from and putting them back on the hive again ; for it is well known that if unsealed brood is taken from the bees and kept in a cold place for a week, the same is killed ; and such killed or dead brood will be removed by the bees as soon as they have access to it. My plan used to be, before I learned of the prevention as given above, to take sections, found with eggs and unsealed larvæ in them, to the cellar, and there leave them for four or five days, when they were returned to the hives again ; and if the queen did not deposit more eggs in them, they were filled with honey ; and when finished were as good as if no brood had been in them. If the brood in the sections had been sealed long enough so that the larvæ have begun to spin their cocoons, then the best thing to do is to cut the comb from the sections ; for honey stored in combs having cocoons in the cells is not just the thing for table use, unless this honey is separated from the combs by the use of the extractor, even though the same be sold as a second or third grade of comb honey, which it would have to be if sold at all, on account of the darker colour the cocoons would give to the combs.—*Gleanings.*

HONEY CANDYING.

In a recent number of the *American Bee Journal* the following questions were propounded to the experts who answer questions through the columns of that journal :—1. Will all good pure honey granulate in cold weather? 2. If not, why not, and how may it be prevented ? The answers are interesting, inasmuch as they clearly show that the cause of crystallisation is a mystery to all of them ; well indeed it may be, for I believe the man has not yet been born who has got to the bottom of this mystery.

Professor Tyndal delivered a lecture in Manchester some years ago on "Crystals and Molecular Force," in which he summarised all that is known of the cause of crystallisation. After describing the varied forms of crystals, their planes of cleavage as they manifest themselves in different substances, and many other interesting things in connection with his subject, he says : "Looking at these beautiful edifices, and their internal structure, the pondering mind has forced upon it the questions, How have these crystals been built up ? What is the origin of this crystalline architecture ?" His reply to these questions is, "Without crossing the boundary of experience we can make no attempt to answer these questions." If the most profoundly scientific minds of this and former generations failed to fathom the depths of this mystery, how can an ordinary bee-keeper be expected to explain it ?

The theory of scientists as stated by the Professor is "That polar force may be resident in the molecules of matter, and by the play of this force structural arrangement is possible. The atoms and molecules of which crystals are built are endowed with definite poles, whence issue attraction and repulsion for other poles. In virtue of these attractions and repulsions some poles are drawn together, some retreat from each other ; atom is thus added to atom, and molecule to molecule—not boisterously or fortuitously, but silently and sympathetically, and in accordance with laws more rigid than those which guide a human builder when he places his bricks and stones together. From this play of invisible particles we see finally growing up before our eyes these exquisite structures to which we give the name of crystals." Such is the theory of crystallisation. While the *cause* is still within the realm of speculation, the result is well known. In many cases the means by which the result may be brought about is also understood. It is known to the salt manufacturer. It is known to the sugar refiner, as well as to the bumpkin who boils sap in the maple grove. It is understood by the thrifty maiden who converts a naked wire framework into a thing of beauty by coating the unsightly skeleton with alum crystals, and to the confectioner who strings his "rock candy" on slender threads. While we are ignorant of the *cause* of crystallisation, I say we know the means by which it may be effected in many substances, and we are also acquainted with the agent to be employed in taking down those crystalline edifices — in reducing to the freedom of liquidity molecules which have been previously locked in one another's embrace ; and, knowing these things, as practical bee-keepers, we know about all we need concern ourselves with on the subject.

Whilst the molecular force to which Professor Tyndal refers is present and active in many substances it is either absent or latent in others. It is both present and active in cane and grape sugar, of which the greater

part of honey consists, hence we have candied or crystallised honey. It is either absent or latent in fruit sugar, which is also a constituent of honey. As this cannot be crystallised, it floats on top of the candied mass, in a glycerine-like substance, generally in small, but sometimes in considerable quantities.—R. McKnight, in *Gleanings*.

Bee Shows to Come.

October 9 to 12.—Dairy Show at the Agricultural Hall, London. Five classes for honey. Liberal prizes. For particulars apply to Wm. C. Young, Secretary, Dairy Farmers' Association, 191, Fleet-street, London, E.C. Entries closed.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Gil Blas (Wakefield).—*Hive Entrances.*—The German plan of having the entrance to hives some distance up from the floor-board is that of Gravenhorst (not Dzierzon), and has never found favour in this country, though to a small extent it has been tried. For ourselves, we think the disadvantages of such a plan are so obvious as to be no more worth discussing, in connection with modern methods, than the unwieldy Gravenhorst hive—with its frames manipulated from below, and requiring the hive to be turned bottom upward before removal—is worth comparison with a modern frame hive for utility.

A. G. Gambrill (Ascot).—We think the mistake was in your not adding the Christian name in front of surname as in advertisements.

T. Batstone (Bath), Geo. Roberts, F. Parton, and Others.—*Bee Parasites.*—Please refer to "Useful Hints" in this issue, where will be found reply to inquiries as to parasites.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

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Prepaid Advertisements (*Continued*)

BEE TENT on HIRE. For terms, apply to G. Gunston, Bradley Green, Wotton-under-Edge.

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NOTICE.—CARBOLIC TOWEL, and Samples of my BEE-SMOKE CARTRIDGES Free (during Sept.) to all Purchasers of my CARBOLINE POMADE. T. Holliday.

INDISPENSABLE to HONEY DEALERS.—HARGRAVE'S Folding Cardboard BOXES for 1-lb. Sections. Sample 3d. post free. Hargrave, Harrogate-road, Ripon.

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Randolph Meech,
Broadwindsor, Dorset.

Editorial, Notices, &c.

BEE-KEEPING IN CORNWALL.

TECHNICAL INSTRUCTION COMMITTEE OF THE CORNWALL COUNTY COUNCIL.

SIR,—Will you allow me to call your readers' attention to the excellent work now being done by the County Council of Cornwall? I particularly allude to that branch of the work under the superintendence of the Technical Instruction Committee.

On the invitation of Mr. J. W. Lawry, an active member of this committee, I visited the experimental farm at Callington, and being particularly interested in bee-keeping in connection with fruit-growing, I was much pleased to see that both these subjects received here their proper share of attention.

Now that it no longer pays to grow corn, if the land is to be used to advantage, and the rural population kept from migrating to our large towns, an interest must be created at home, and some of the minor industries, hitherto so much neglected, must be taken up and encouraged. Amongst such are bee-keeping, fruit-growing, and poultry-rearing. It may not be generally known that for successful fruit-growing bees are indispensable, as upon them principally depends the fertilisation of the blossom, without which there would be no fruit. The imperfect and deformed fruit are entirely due to improper fertilisation of the blossom, either from a scarcity of bees in the neighbourhood, or from bad weather preventing bees leaving their hives.

Besides this advantage to the fruit grown, bees, if properly kept, yield a handsome return in honey, for which there is a ready market. In fact, the supply of British honey does not come up to the demand, and we import from abroad honey to the value of about £3,000 a month. According to the BRITISH BEE JOURNAL, the official organ of the British Bee-keepers' Association, during last month (August) the value of the honey imported was £2,937.

The honey production of the rural districts is nothing like developed, and it is calculated that most parishes ought to yield on an average at least a ton of honey. Probably not one-sixth of this is actually produced. I have been much struck in travelling through Cornwall by the scarcity of bees, and this notwithstanding that the pasturage is very good. Clover, which is the chief source from which honey is derived in this country, abounds. In many countries this is the only honey resource, but in addition to this in Cornwall bees find another harvest from fruit blossoms, more especially the small fruits, such as strawberries and raspberries, which supply nectar early in the spring. All this goes to waste for want of bees to collect it.

All the way from Saltash to Callington I did not see a single modern hive of bees, and only one cottage where bees were kept in straw skeps, and this in a neighbourhood which, in a large measure, depends upon bees for its productiveness. Much ignorance exists, both as regards the culture of bees and fruit; therefore the efforts of the Technical Instruction Committee to demonstrate at Callington that both bees and fruit can be profitably cultivated is specially to be commended, and in every way encouraged.

The Callington Farm is planted with strawberries, apple and pear trees, and in the midst of these there are five modern movable frame-hives in capital order. I had the opportunity of examining them in the presence of the committee and friends, and found that the hives contained a quantity of excellent honey. It was explained to those present how the honey could be taken without destroying the bees, and how much superior it was to that taken on the old method. I feel sure that to get bee-keeping taken up in the county it is only necessary for the Technical Education Committee to have occasional demonstrations to show the ease with which bees can be manipulated, followed up during the winter months by a course of lectures illustrated with lantern slides.

Apiculture as an industry is now being generally recognised, and many county councils have made grants for technical instruction in bee-keeping, and I do not think that there is a better plan of bringing the subject before our cottagers than by practical demonstration such as could be carried out at the apiary at Callington. From what I have seen of Cornwall, I think it splendidly adapted for bee-keeping, and it is to be hoped that this departure of the Technical Instruction Committee will receive at the hands of the public the recognition and appreciation it deserves.—Yours truly, THOS. WM. COWAN, F.L.S., &c., Chairman British Bee-keepers' Association, *Penleaze, Fowey, Cornwall, September* 19, 1894.—*Western Morning News.*

LANCASHIRE AND CHESHIRE B.K.A.

SHOW AT BIRKENHEAD.

An exhibition show of honey was held at Birkenhead in connection with the annual show of the Wirral and Birkenhead Agricultural Society, on September 5 and 6. The bee tent of the L. and C.B.K.A., in charge of the Association's expert (Mr. W. J. Anstey), was on the ground both days. Rain interfered with the proceedings on the first day, but on the second Mr. Anstey gave a lecture and demonstration to a large audience.

In the honey department a very fine display was staged, larger, I believe, than has ever been before brought together at this show, there being a total of sixty-five entries, no less than fifty-two of which were in the class for extracted honey, mostly of remarkably fine

quality: indeed, the judge must have had some difficulty in selecting the winners.

With the exception of one or two exhibits among the sections, there was nothing really first-rate.

Mr. W. J. Anstey undertook the duties of judge, and made the following awards :—

Twelve 1-lb. Sections (Open).—1st, Harry Wood, Paradise, Lichfield, Staffordshire ; 2nd, H. M. Bryans, Cholmondeley, Malpas, Cheshire ; 3rd, W. Woodley, World's End, Newbury, Berks. ; 4th, S. R. Horton, Harley Tower.

Twelve 1-lb. Jars Extracted Honey (Open).—1st, Dr. B. E. Jones, Freckleton, near Preston, Lancs. ; 2nd, Rev. J. S. Evans, Hargrave, near Chester ; 3rd, Rev. E. Charley, Ince Vicarage, Chester ; 4th, Owen Roberts, The Lodge, Rowton Grange, Chester ; h.c., Alfred Thomas, Richard L. Fryer, Joseph F. Williamson, and Wm. Woodley.

Twelve 1-lb. Sections (District).—1st, Rev. J. S. Evans ; 2nd, H. M. Bryans ; 3rd, R. L. Fryer, Davenham, near Northwich, Cheshire ; 4th, Wm. Corkhill, Edge Hill, Liverpool ; h.c., Wm. Tyrer, Prescot, Lancs.

Twelve 1-lb. Jars Extracted Honey (District).—1st, R. L. Fryer ; 2nd, Dr. B. E. Jones ; 3rd, Rev. J. S. Evans ; 4th, Rev. E. Charley ; v.h.c., John Hale, Owen Roberts ; h.c., Rev. Allen G. Glenn, John Oultram, Fred. Dutton, H. Firth, Alfred Thomas, R. W. Nickson, H. W. Bennion, P. H. Rawson, J. H. Bennett, and Rev. J. S. Evans. —(*Communicated.*)

OXFORDSHIRE B.K.A.

The Oxfordshire Bee-keepers' Association held their annual exhibition of honey and wax in connection with the Woodstock Show. The entries were not quite up to the average owing to the great demand for honey, but there was a decided increase of cottagers' exhibits. The silver medal of the British Bee-keepers' Associaton was won by Mr. H. Edginton, cottager, of Cassington, for a fine lot of sections. The bronze medal went to Mr. Slatter, cottager, Coombe, and the certificate to Mr. Anstey, Oxford. The judge was the Rev. E. Davenport, of Stourport, and Mr. E. F. Turner, of Oxford, assistant hon. secretary, was responsible for the staging and management. The awards were as follows :—

Twelve 1-lb. Sections.—1st, H. Edginton ; 2nd, — Slatter ; 3rd, W. J. Anstey.

Twelve 1-lb. Jars Extracted Honey.—1st, H. M. Turner, Northleigh ; 2nd, Grant, Oxford.

Six 1-lb. Jars Extracted Honey.—1st, S. Hancox, Wytham ; 2nd, H. M. Turner.

Beeswax. — 1st, T. Hughes, Combe ; 2nd, S. Hancox.

Specimen Jar.—1st, H. M. Turner ; 2nd, W. J. Anstey.

Glass Super of Honey.—1st, S. Hancox ; 2nd, — Slatter.

COTTAGERS' CLASSES.

Three 1-lb. Sections.—1st, H. Edginton ; 2nd, Jones, Cassington.

Beeswax.—1st, Jones ; 2nd, H. Edginton.

Twelve 1-lb. Jars Honey.—1st, H. Edginton ; 2nd, Slatter.

Six 1-lb. Jars.—1st, Slatter ; 2nd, H. Edginton.

OPEN CLASSES.

Straw Skep of Honey.—1st, Thomas Harris, Combe.

Best and Largest Exhibit of Honey.—1st prize, a bar-frame hive, given by Messrs. Turner & Sons, Oxford, was won by Slatter, Gladstone Cottage, Combe.—(*Communicated.*)

ANTWERP EXHIBITION.

BELGIAN CUSTOMS OFFICIALISM.

I think a word of warning is needed so that in future no English manufacturers are deluded into sending goods to any future exhibition in Belgium. The gallery in which the Bee Exhibition was held was most carefully guarded with police and customs officers, so much so that even the smallest article was promptly stopped at the door if an attempt was made to take it out. However, during the night of the closing day of the exhibition nearly all my prize honey was stolen, also the whole of my hydromel ; and other exhibitors who had even taken the precaution to pack up their honey before leaving for the night had it stolen, package and all. In view of the above-named stringent precautions against the removal of goods, we can only put the theft at the door of those whose duty it was to guard them. The next day I could get no remedy whatever, and the customs officials tried in a most determined way to add insult to injury by attempting to impose customs duty on the stolen honey. I resisted, and at last they consented to forego it. The method of levying said customs duties on hives was unique. Of course I was prepared to pay duty on the catalogue price of these hives ; but no, they insisted on duty being paid on catalogue price of article plus cost of packing-case and cost of transit from Welwyn to Antwerp. This is not much encouragement to English manufacturers to go out to Belgium, and practically make their show presentable, and also provide the Belgians with models of goods to copy. I feel sure that in view of this treatment no English manufacturer will again be induced to exhibit.—THOMAS B. BLOW, *Welwyn, September* 27.

EXHIBITION OF BEES AT DERBY

IN CONNECTION WITH THE YOUNG MEN'S CHRISTIAN ASSOCIATION.

Referring to the notice which appeared on p. 332 of issue for August 23, we are very pleased to receive a cutting from a local paper

which records the following gratifying result of the effort made by the promoters of the exhibition :—

"On Wednesday evening last the rooms of the Y.M.C.A., in St. Peter's Churchyard, were more than usually crowded. Mr. Walker, of the Cattle Market, an enthusiastic member of the Y.M.C.A., had arranged a bee exhibit for the benefit of the building fund. A large quantity of honey in jars and sections had been given by friends of the association, and this was sold, together with an amount of fruit, flowers, and vegetables. A feature of the proceedings was the lecturing of Mr. Jones, of Etwall. A thorough master of his subject, this gentleman delivered two most interesting lectures, describing in the first the province of bees in the fertilisation of flowers, and in the second dealing more with practical bee-keeping. At the former Captain Reid presided, and at the latter the chair was taken by Mr. Davidson. Those present were very much interested in watching the movements of the bees in the show hives belonging to Mr. Walker, and altogether an exceedingly interesting and profitable evening was spent. A vote of thanks to Mr. Walker, Mr. Jones, and all who had helped by sending honey, fruit, or flowers, and in other ways, was carried unanimously. It should be mentioned that the apparatus used (also the lantern) was kindly lent by the County Council. Mr. Walker promised to get up a similar exhibition next year."

BEE-KEEPING IN DUMFRIESSHIRE.

The Rev. Robert M'Clelland, minister of Inchinnan, Renfrewshire, who was recently engaged to lecture on bee-keeping at several centres in Dumfriesshire, has presented a report to the County Technical Instruction Committee. Dumfriesshire, he says, has been the first county in Scotland to give a grant in aid of bee-keeping, and it had conferred an honour on him in naming him the first lecturer. The shire as a whole is a good one for bee-keeping—in many districts particularly so. The prevalence of old pastures rich in white clover, the nearness of the heather hills, and the decidedly more favourable climate as compared with the West of Scotland in dryness and warmness, make this clearly apparent. Again, the amount of honey tabled at the shows in an unsettled season like the present is proof positive on the subject. It was his privilege at every place visited to meet with bee-keepers of high standing and culture in the craft, and to see here and there apiaries of such dimensions and in a condition to be a credit to any country in Europe ; but this, he is bound to say, is the exception. Ignorance, scepticism as to results, and indifference and carelessness as to the methods of bee-keeping largely prevail. Antiquated ways of working, neglected hives, and the presence of "foul brood" or "bee pest" call for immediate and radical reform. It is within the truth to say that Dumfriesshire in a good year could easily produce a hundredfold the honey harvest it now does. This means that there is scarcely a farmer or cotter but might materially add to his home comforts and even financial resources by bee-keeping. He strongly recommends the County Council to renew its grant next year, but on a more liberal scale. In England grants varying from £50 to £150 have been given in several counties with the most gratifying results. What is needed is not merely a series of lectures in different centres, but a three or four weeks' tour of the country, visiting apiaries, and addressing meetings, which local associations could assist in getting up ; the County Council to pay the lecturer's salary and expenses.

BRITISH BEE-KEEPERS' ASSOCIATION.

QUARTERLY MEETING AND CONVERSAZIONE.

The next quarterly conversazione will be held at 105, Jermyn-street, on Thursday, October 11, at six o'clock. Members desirous of introducing subjects for discussion, or to submit new, improved, or interesting appliances, are requested to communicate with the undersigned not later than Monday, the 8th inst. — JOHN HUCKLE, Secretary, *King's Langley.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C." (see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

QUEEN-REARING.

THE RESULT OF THREE YEARS' EXPERIMENTAL WORK.

[*Continued from page* 386.]

The cells being ready, dip the end of each in hot wax, and at once place them *in situ* on the bar before described, preparatory to the royal food and larvæ being transferred into them. The cells are placed about ½ in. apart, alternatively towards the outer edges of the bar. Here, however, like many others who endeavoured to follow in Mr. Doolittle's foot-

steps, I did not get on quite satisfactorily, only an average of 50 per cent. of my cells being accepted; and so, after many trials, I departed somewhat from his methods; but before touching upon this, it may be well to finish the outline of Mr. Doolittle's final operations, as follows:—Having your frame ready—with artificial cups in position—cut out a queen-cell containing a good supply of royal jelly (from a stock made queenless on purpose to obtain the first supply), remove the young larva which it contains, and place a very small portion of the royal food at the bottom of the artificial cup (Mr. Doolittle is rather indefinite as to the quantity necessary)—the amount required, however, is a small drop about the size of the inflammable portion of a common safety match; place this right in the centre of the artificial cup, and, if made after my method, it should rest in the apex of the *natural base*. Having supplied all the cups with this food, remove a comb of just-hatched larvæ from the hive containing your best breeding queen, and transfer the larvæ to the prepared cells, putting each tiny grub directly into the royal food already therein. The larvæ must be under thirty-six hours old to procure the best results. (In case the operator does not know how to judge the age of the larvæ, take only the smallest.) Place the frame of cells in the prepared super. To do this, of course quickly and well, requires practice, but one soon gets expert at it, for, with the cells already on the frames, I have gone to a hive, removed a frame of brood and bees, returned with same to my heated work-room, transferred larvæ to the prepared cells of three frames (nine cells on each), placed same in three different supers, and returned frames of brood to hives, which includes opening and closing four hives, all in the space of twenty minutes. In transferring the larvæ nothing answers so well with me as a thin little slip of wood cut very thin and pliable at the point, and slightly curved so as to slide easily and smoothly under the little grub, and raise it bodily from the bottom of the cell. By the above method I could count on 50 per cent. of the cells being accepted and turned into fine queens. Considering the fickleness of our climate and other disadvantageous circumstances beyond control, this was a fairly good result, yet I was not satisfied, and after trying many improved methods, including that adopted by Willie Atchley (of Texas, U.S.A., who has the repute of being the youngest and one of the most extensive queen-raisers in America), I at last hit upon the following method, by which I can ensure 70 to 80 per cent. of equally good queens every time:—I prepare the frame and wax cups exactly as already described, but before placing either the royal food or young larvæ therein, I set the frame in a prepared super of a queened stock for acceptance by the bees. If the bees destroy the cells, or treat them with indifference, as they will do if they don't want them—I pass on to the next hive and give them a similarly prepared frame; but it is very seldom they are refused if the hive is properly prepared and honey is coming in. Occasionally, however, and from some cause beyond my present knowledge, I have known a hive to refuse the prepared cups to-day and accept them to-morrow. If accepted, they are converted into perfect embryo queen-cells, narrowing the orifice and working the thin outside edges the same as if starting ordinary queen-cells. About twenty-four hours usually proves whether the bees have accepted the cells, and then, if found right and being worked at, the royal jelly and larva can be placed at once in each cell and given to the bees to complete. This is a sort of "approbation" process, because I give the crude cells to the bees first "on appro." to get them worked at and modelled to meet their little requirements before placing the food and young grubs therein. Far less risk is thus incurred of having them ultimately refused, and the result has shown me that I get a far higher percentage of cells finished. Some will be refused, even after acceptance at first; but, if the right time is chosen, from 70 to 80 per cent. is the average of accepted cells.

The actual manipulations connected with the transference of young grubs from the natural comb to the prepared cells may seem to many a tedious and difficult task before trial; but if a square inch of comb containing the young larvæ is cut out, and the cells shaved down to about $\frac{1}{8}$ in., the task is much more easy than it looks. What I desired, however, was to arrive at some method of retaining the advantages of the Doolittle plan and yet save this transference of the larvæ; for, although I succeeded perfectly with it myself, it is very probable that others less accustomed to so "natty" a job, or perhaps through nervousness, might run a great risk of damaging the delicate little larvæ, or of not getting it in its *natural* position, which is essential to success. After many trials I at last found the following plan answer well:—Prepare the frame as before, and get the cells accepted by my "approbation" plan; then, with a sharp, warm knife, cut the accepted cell just above the base (inside), so that the base is left on the bar, and the part cut off forms a collar which fits on the base. Then with your "former" slightly enlarge the base of the collar, but avoid handling the collars more than is necessary, and always have clean hands. Now cut out a piece of comb containing suitable larvæ (a strip 2 in. or 3 in. long is now best), shave off the back cells down to the mid-rib or septum—I find cells that have been used for breeding once or twice best for this process, new cells being too soft, and old comb too tough—and cut the front cells down to $\frac{1}{8}$ in., taking care not to touch the larvæ, or it will be irretrievably damaged. Cut out as many complete cells containing larvæ as are required, and remove all the

surplus wax of adjoining cells. From the sides of the chosen ones now place carefully a small portion of thin royal jelly on the top of the young larvæ, and by the time you have placed the jelly in all the cells the young grub in the first cell operated on will have wriggled its way to the top of the food, and be seen floating on the royal jelly. It is then transferred bodily on to the base of the prepared cup; then slip over the "collar" which was cut off and press well home, and the job is done. When all cells are fixed and on the frame I slip the latter into a well-warmed flannel bag, take it to the hive, and put it in the super as quickly as possible.

All these operations must be carried out in a temperature of not less than 85 deg. Fah. I prefer one of a temperature of 90 deg., as the young grubs are then kept growing, and run no risk of being chilled. I have a small workroom built expressly for this particular work of queen-raising, in which the temperature can be raised at will. It is also necessary to have a small box into which a block of heated lead or iron, wrapped in flannel, is placed for purpose of transporting the larvæ, when cut out, and a bag (large enough to hold a standard frame) made of several thicknesses of woollen material. The heated box is also useful for carrying queen-cells about from hive to hive when completed.

For the first of these processes I have discarded cutting the combs to obtain the larvæ, and now remove the frames, bees and all, into my warmed workroom (taking care the queen is left in the hive). I lay it on a sloping wired frame and remove the little grubs as required. My workroom is provided with a window which swings round on centre pins, so that if the bees are troublesome and block the light while I am working, one swing of the window and they are all outside. This will be found a great convenience.

In America, where the temperature rises above 85 deg. for months together, heated appliances and rooms may, of course, be unnecessary; but here in England, where in April and May last the temperature for weeks together was not more than 54 deg., and on some days (when I successfully transferred the little larvæ in my heated room) was down as low as 42 deg. in the open, had I not been practically able to control the temperature, I should have failed. There are no doubt some days, even in this country, when the work could be done in the open, or with slight protection; but they are few and far between, and generally occur at a season when the best results cannot be obtained, as it is too late to get the finest queens.

One of my experiments has been devoted to finding out, as nearly as possible, at what temperature very young larvæ will chill and die, and I find approximately that from four to five minutes outside at 65 deg. is fatal to it, while under the shelter of an open shed, protected from the wind, it is alive after fifteen minutes at the same temperature. But whether it would recover the effects of the chill if subjected to subsequent warmth I am at present unable to say.—HENRY W. BRICE, *Thornton Heath, Surrey.*

(*To be Continued.*)

MEN OF FORCE.

[2078.] It is only when one is out of the prominent few who are ever active in the bee-world that our own individual littleness is forcibly brought home to us. One views the lights amongst bee-keepers at a distance, and their effulgence is correspondingly subdued, because all differences of opinion and opposite ways of viewing things, ever active when we are in the thick of the throng, become softened off by the atmosphere of distance, and faults and perfections lose their sharp reflecting faces. Then we get from our JOURNAL the sad news that a prominent light amongst us has been extinguished, and the mind, in sadly recalling the past, turns its telescopic vision on memories that crowd in upon it to find how great is the dead and how little are we. "Nothing of the dead but good" is a most wholesome motto, so permit me, under its ægis, to give your readers a few most prominent thoughts on two most prominent men who have left us since I last wrote to the JOURNAL —F. R. Cheshire and C. N. Abbott. I should think no two could be more unlike in disposition than these, and yet how like! One so intensely scientific and theoretical, but practical withal; the other how very practical in all that concerned our art, yet losing nothing science could teach him that might be brought to the service of the bee-keeper and the bee.

I well call to mind accompanying Mr. Henderson (late sub-ed. B.B.J.) to hear a course of lectures by Mr. Cheshire. The audiences were scant, and were drawn closer together in the theatre of the School of Mines, Jermyn-street, by the lecturer, who said under the circumstances he would talk to us *en famille;* then followed such an interesting extempore address as he, and he alone, could give. From that moment I decided to try and follow in his footsteps, no matter at how great a distance, and I here admit to you and in my own mind that the charm of style I then so intensely enjoyed had more to do with my future career in bee-keeping matters than any other thing I can now think of. His words will live (in my opinion) when his practical work as a bee-keeper will be forgotten, precisely as the work of C. N. Abbott as a practical pioneer will outlive his writings. Yet, nay! How can I say that when I refer to the early numbers of your JOURNAL and find them so saturated with words of bee-keeping wisdom?

It is one of the signs of age (therefore I am getting old) when one looks upon the past generation as being so *superior* to the present in everything. We remember our fore-elders

used not to fail in giving utterance to such sentiments. We look round, and see none living so great as the dead. In tragedy or comedy, in music or literature, in singing, acting, preaching, or writing, none are so mighty now as then, although

"There are *still* some few remaining who
remind us of the past."

May the time be very distant when their greatness will be accentuated by our loss of them! These last whom I name were well appreciated during their life; they did good work, and were well thought of; their memory is sweet to the mind of an old bee-keeper whose name may be remembered by a few old hands.—R. A. H. GRIMSHAW.

SAVING THE BEES.

[2079.] I am glad to be able to tell you that the fourteen skeps of bees I wrote to you about (2035, p. 303 of B.J. for August 2) have been successfully driven. I accidentally found out that the brother of a friend of mine would kindly come and show me how it was done. He drove two for me, and the rest I managed quite easily. I have united five lots with the stocks I intend keeping through the winter, and the other nine I have put into three skeps.

Will you kindly tell me how to proceed to keep the three last skeps of bees through the winter? I can plainly see that driving is far better than burning, and certainly should never resort to the latter again.—A. B. C., *Cambs., September* 28.

[If the driven bees have been put into combed skeps (as they certainly should have been) it will only be necessary to see that they each have 15 lb. to 20 lb. of good food for wintering on, and are kept dry and warm by some sort of covering.—EDS.]

THE "WELLS" HIVE.

FROM A COTTAGER'S POINT OF VIEW.

[2080.] I have now read the BRITISH BEE JOURNAL for many years, and during that time have had to do with many hundred hives of bees, but the "Wells" hive seems to be the master one that I have ever heard talked of. So far as having a double hive, I tried one fifteen years ago, but could never get the bees to store honey in it as others seem to be doing nowadays; in fact, I gave mine up as a bad hive, and it has for years been used as a store-place for lumber. But after all I read in your pages, I begin to think I must rub the dust off my double hive and start it again on another trial. Friend Nicholls (2058, p. 346), who I know very well, was at my place some time ago, and our talk as usual turning on bees, he complained of it being a bad year with him, and that he should have to feed. Yet on opening my journal I found to my surprise that he had been trying the "Wells" hive and had taken 183 lb. from it. And that, too, in a "bad year," when some bees worked on the old plan were about starving! Then comes your correspondent, Wm. Tustain (2069, p. 365), and beats friend Nicholls by 73 lb., with 256 lb. from his "Wells," so even with the 10 lb. of sugar and the "nice cake of candy" that the hive wants for winter, it is a big "take." And although I have looked on my double hive as an old coat that was done with, I must dust it down, and, after repairs, try it once more. It would be a great help to us cottage bee-keepers if some of the successful "Wells'" bee-keepers would tell us how it is done, or how these tremendous results are got at. I know our editors are very kindly disposed towards the cottager, and that these big takes from "Wells" hives are printed so that others may benefit and do likewise. This is rousing us up, and when I see friend John Walton bringing out his cast-off double hives again to work them on Mr. Wells' plan, it makes one want to have his report of their doings in this—to me—the worst honey season I have known for years.—W. MARTIN *High Wycombe, Bucks, September* 27.

GLASS COVERS FOR HIVES.

[2081.] No one having taken up my suggestion in a recent letter (2043, p. 316 B. J., August 9) as to using glass as a hive cover in lieu of wood covers or quilts, allow me once more to return to the charge. I have been much interested in Mr. Shea's letter (2073, p. 375), but I think he will find my plan has also great advantages. First of all, I place on the top of the frames a light framework formed of slats of wood $\frac{1}{4}$ in. deep, and of any width sufficient to give strength and carry section crates, secured at the corners with tin strips. These may either be large enough to go on the top of the body-box or lift, and be secured by the pressure upon them of the next lift; or, preferably, they may fit neatly inside, so as to remain undisturbed when lifts are taken off or put on. Upon this skeleton framework the sheets of glass (or of excluder zinc) can be placed without crushing a single bee, as is almost unavoidable whenever glass, excluder zinc, crates, &c., are placed immediately upon the top of frames. In fact, the use of these wooden rims has, for me at least, converted the handling of my hives from an anxiety to a pleasure, as in this way a bee-space is provided over the whole space on the tops of the frames—a most desirable arrangement in every way. I find the greatest trouble consists in getting the sheets of glass accurately cut so as just to fit nicely within the cavity of the lifts. No two hives seem perfectly exact in measurements; and practically I am obliged to have a separate sheet of glass for each hive, or the bees

escape. Two-thirds of the length I have a 2-in. round hole cut out (which can only be done by good glass-cutters) for feeding purposes right over the cluster; this can easily be closed, when not wanted, by a cork, a piece of wood cut to fit, or even a card. Over the glass any desired amount of quilting, felting, &c., can be piled up, which will always be clean, and removable in a moment.

The advantages of this plan, I repeat, are indeed great. At any time, summer or winter, it is possible to look down through two stories of frames without disturbing a single bee; and they soon become so used to the removal of the coverings over the glass, and to the admission of light, as not to resent the inspection—indeed, they become appreciably tamer. If it is necessary to remove the glass and examine the hive, all the advantages claimed by Mr. Shea and others for the wood cover are applicable to the glass-sheet, which is much cleaner, and I should think cheaper. The cost of mine was 6d. for each sheet, 17 in. by 15 in., and 6d. for cutting out the feeding-hole in each. This feeding-hole is a great comfort, as, *e.g.*, I can watch how two hives of driven bees are progressing with comb-building and storing. The glass sheets can be exchanged for excluder zinc, or section crates, or quilts (if desired) at any time, without, as a rule, a single bee rising, as all these are lifted off and set down on the wooden rim round the whole top opening of the hive. Next summer I shall have at least two of these rims for each hive—one below carrying the excluder zinc, and another above, for the top glass sheet, and, perhaps a third mid-way to carry the section crates on the excluder zinc. In practice I find the trouble of brace-combs very small. I hardly ever use the smoker, but the carbolised cloth slipped on the top of the frames sends down every bee, and allows all brace-combs, propolis, &c., to be rapidly scraped off without trouble.

I now have four single hives and one "Wells" hive fitted up as I have just explained, and next year, all being well, I will describe how the bees have wintered, and I hope prospered. At the present time, all six (counting the "Wells" as two) colonies are feeding, comb-building, and storing, most energetically, under the glass, and are a source of great interest to friends. I have given each hive a story of shallow frames over the body-box, as I believe they will winter better, and I want the shallow-frame combs built out to story up on the "Wells" hive next year.

May I conclude with one warning, derived from experience, which may possibly explain why bees sometimes do not take kindly to supers? Last spring the hives I then had were arranged with the frames spaced as closely together as possible, to ensure straight combs being built. I put the excluder zinc down on top of these without thinking. When I took it off in the autumn, I noticed, for the first time, that owing to the very close juxtaposition of the frames below there were positively only two—at the most three—lines of openings through which the bees could pass up through the excluder zinc; all other openings were closed by frames or combs. Well as my bees did, considering the bad season, they would, I should think, have done much better if they had not been so terribly handicapped in travelling up and down. With excluder zinc, care should be taken that the interspaces between combs correspond with the lines of slits; or, I think, far better still, a ¼-in. deep framework, allowing free bee space all over top of hive, should carry the excluder zinc, section crates, &c.—W. R. N., *Sussex*, *September* 28.

[Referring to our correspondent's "warning," and without here entering into the question of the advantage or otherwise of a bee space between tops of frames and the queen excluder, we would observe that the latter, when laid direct on to the frame tops, should always be so placed that the length of the perforations run *across* and not parallel to the spaces between the frames. In this way—as is well known to experienced bee-keepers—none of the openings are blocked up by the zinc.—Eds.]

Queries and Replies.

[1166.] *Carrying Driven Bees.—A Disaster.*—A friend of mine drove the bees of three skeps into one hive some time ago; two were weak lots, and one fairly strong. After driving we tied them up and carried them a distance of four miles home. On untying the cloth we noticed that it was very wet, and on removing it, to our surprise, fully two-thirds of the bees were lying in a heap seemingly drowned in honey. Not being able to do anything, we left them as they were untied and free, so as to give them plenty of ventilation, but none seemed to recover, and we found the next morning only a weak little lot left alive. However, we had the pleasure of uniting another lot to them; they are going on well now. Can you tell me what was the cause of the disaster? The bees were carried in the skep mouth downward, but there was no hole in top for ventilation.—"A Novice" (just starting), *Kidderminster*.

Reply.—The bees were without doubt suffocated. Had the covering been of coarse open canvas or cheese-cloth, and the skep carried *mouth upward*, all would have been well and the bees safe. It was the want of sufficient air that caused them to disgorge the honey with which they always fill themselves on being driven, and, falling in a mass on to the covering below, thus made matters worse

by stopping ventilation almost entirely. In carrying so many as three lots of bees in one skep provision should always be made for a through-current of air. It is also important to use an open material for covering, and to carry bottom upward.

[1167.] *Material for Standing Hives on.*—I have a row of frame-hives standing in line adjacent to garden path. The grass seems to grow excessively fast all amongst the hives. Would a layer of tan be a suitable material to put down to prevent this; if not, what would you recommend?—WEEDS, *Warwicks., September* 26.

REPLY.—Some means should first be taken to prevent the growth of weeds by removing a few inches of soil and filling in with tarred rubble or other suitable material. This done, tan, sawdust, or fine ashes—if kept neat—would answer the purpose referred to. We have seen concrete used for hives to stand on, but it forms a colder surface for bees to alight on in winter than the materials named above.

[1168.] *Wintering Weak Stock in "Wells" Hive.*—I have a small swarm on three frames which I do not think will be able to winter by themselves, but as they have a very good young queen, I do not want to unite them. Do you think if I used a "Wells" dummy, and put them in the same hive as another stock, they would winter so? or what would be the best thing to do?—E. A. DOUGLAS, *Underhill-road, S.E.*

REPLY.—If you can so manage the "Wells" dummy as to get both lots of bees to gather on it, and so form one continuous cluster, it will, no doubt, be of great assistance in carrying the weak lot safely through the winter.

[1169.] *Suspected Foul Brood.*—1. Is comb sent foul broody? The bees (a swarm of May last) died or left the hive after building out only about three of the frames of the foundation. I fancy they had been queenless for a while, as they got some rough handling before getting them into the hive at the time of swarming. 2. Would it be safe to give the other frames of foundation to bees, seeing they have been in the hive so long? 3. Is there any way to extract heather honey from brood-frames without spoiling the combs, or is it better to remove the two outside combs and replace them with frames of foundation?—D. M'G., *Pennyfuir, Oban.*

REPLY.—1. Comb is quite free from disease, but it bears plain evidence of the swarm having become queenless after hiving. 2. Yes, quite safe. 3. Heather honey can only be removed from the cells by pressure and destroying the combs. If the outside combs are removed now, the proper time for replacing them with foundation is in May next, when a frame may be inserted in centre of brood-nest, and a few days later the second one.

[1170.] *A Beginner's Queries.*—I have only just started bee-keeping, and would like a little advice on the following:—1. Lately I have often found a good tablespoonful of water in the roof of my hive, drops of water hanging all over. How can I prevent this if harmful to bees? Some bee-keepers say use porous quilts, so that moisture will escape; others advise a non-porous quilt of enamel cloth, which must keep down all moisture. 2. Which do you recommend? 3. If bees are fed on dry sugar or candy will they store it in cells? 4. Do bees eat the nectar when gathering, or only after being converted into honey, and how long does it take to be so converted? 5. Will syrup from 10 lb. of sugar to 7 pints of water float on top of honey? 6. How can I tell when to take supers off? seeing we have heather about here. 7. Are queens fed with chyle-food during their whole lifetime or only in the larvæ state? Thanking you in anticipation, T. SIMPSON, *Farnham, Surrey.*

REPLY.—1. We should say the roof leaks, otherwise there is no reason for finding water as stated. 2. An enamel cloth quilt next the frame, glazed side downward, is our preference with hives well ventilated from the bottom, but with others we would use porous coverings. 3. Yes, but bees should not be fed on dry sugar or candy except under special conditions and at special times. 4. It is of so little consequence whether or not "bees eat nectar when gathering" that we never took trouble to ascertain, nor need you. The bees discharge the contents of their honey-sac on returning to the hive, and when the superfluous water has evaporated in the cells the conversion is complete. 5. Yes, but why do you ask? 6. They should be removed when completely sealed over, and only examination will show this. 7. In larvæ condition only.

[1171.] *Honey Statistics and Profits from Bee-keeping.*—Information as to the following points will oblige:—1. Statistics as to the production of honey, &c., in the British Isles, and the amount of imports. 2. The best source of information as to the profits derived from bee-keeping. 3. Whether there is a good set of lantern slides to be had to illustrate lectures.—FIFENSIS, *September* 26.

REPLY.—1. No statistics are available as to the production of honey in these islands. The value of honey imported appears in our pages every month, and we can only gross the totals at end of each year. In 1891 the value was £34,429, in '92 it rose to £62,727, and last year it fell to £29,087. 2. We know of no better source than the reports which appear from time to time in our pages. 3. There are several sets of lantern slides published, one of which—those of Messrs. Newton & Co., Fleet-street, London—were prepared with the assistance of the committee of the British Bee-keepers' Association, and may be hired from the latter body.

[1172.] *Queen-Raising.*—I have in my apiary a colony of bees, which for two years did not produce more honey than necessary for wintering them. Others of my stock did moderately, but this one only produced bees sufficient to cover ten or twelve frames. I cannot say they swarmed, and yet the bees were always very fierce, so I decided to try a Carniolan queen, which I purchased from a noted dealer. Having received her safely, I removed the old one on July 7. They accepted the stranger quite satisfactorily. She appears to be doing well, but I cannot perceive much difference in the present bees. I am therefore sending a few for you to examine, and should be pleased to know if they are Carniolan. If so, I should like to raise queens from this colony to introduce to others. Will you kindly advise me of the best and simplest method, and when preparations should be made?—J. W. STEPHENS, *September* 26.

REPLY.—These are not pure Carniolan, but only hybrids. The best time for preparing to raise queens is when the natural swarming season approaches. For the "best method" we need hardly say our correspondent must procure a book in which queen-raising is fully dealt with before he can hope to succeed. We could do very little by way of teaching the art of queen-raising in our Query and Reply column.

Echoes from the Hives.

Pennyfuir, Oban, September 21.—We have had splendid weather here since August 16; we had no rain, and bees are gathering off the heather yet.—D. McG.

A REQUEST.

Secretaries of county bee-keeping associations will please send half-a-dozen specimens of their county honey-label, this week certain, to Mr. Jesse Garratt, Meopham, Kent. It is proposed to exhibit a sheet of labels at the forthcoming Dairy Show, to illustrate the scheme of honey labelling.

Bee Shows to Come.

October 9 to 12.—Dairy Show at the Agricultural Hall, London. Five classes for honey. Liberal prizes. For particulars apply to Wm. C. Young, Secretary, Dairy Farmers' Association, 191, Fleet-street, London, E.C. Entries closed.

October 26.—Ayrshire Agricultural Association's annual show at Kilmarnock. Great honey competition. Numerous classes, with liberal premiums. For schedules, apply Jas. McMurthrie, secretary, Ayr, N.B. Entries close October 12.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

We are compelled to postpone biographical notice of the late Mr. F. R. Cheshire till next week.

A READER (Kidderminster).—*Saving a Weak Lot of Bees in Skeps.*—Bees were so crushed in post as to be quite unrecognisable. If the robbers are marked as stated they would be hybrid Ligurians. It is not much use trying to preserve a weak lot of bees that are "now being badly robbed" without resistance. If you have built-out combs in a frame-hive, and united a driven stock to them as proposed, they might live—but is a "weak lot" worth all that trouble?

A. V. ANDREWS (Shepton Mallet).—*Naphthaline for use in Bee-hives.*—This article is sold in various forms and of differing degrees of strength. It was the frequent reports of serious mischief to bees—through overdosing—coming to our knowledge that caused us to send it out from this office in such form and strength as to enable us to regulate the dose, and so avoid such mishaps in future. Commercial naphthaline, as used in some trades, asphyxiates the larvæ, causing whole combs of brood to perish.

A CORRESPONDENT ("H. C.") asks:—What thickness are the grooved wooden plates in a "Garstang" honey-press, and how deep are the grooves on the same? Will any of our readers supply the information?

MERSEY (Ashton on Mersey).—*Mouldy Comb.*—If the dead brood remains and has caused the mouldiness we should cut away and destroy the part so affected, rather than give the comb back to the bees.

A. B. (Stourbridge).—*Wintering Bees at High Temperature.*—We have never heard of an advertisement such as is referred to. Where did it appear? In any case, it is found disadvantageous in many ways to attempt to keep bees in an artificially raised and abnormally high temperature during the winter months.

YOUNG TIVERTON (Tiverton).—*Feeding Bees in Skeps During Winter.*—1. Bees should not be fed during winter. The needful amount of food should have been given before now, but where food is still short it must be given by means of an inverted bottle through a hole cut in crown of skep. The bottle, after filling with warm syrup, has its mouth covered with a piece of calico tied securely on, and is then inverted into

the feed-hole and wrapped round at the junction with a roll of newspaper to keep bottle upright and prevent bees from reaching the food from outside. 2. A swarm hived so late as August last will have had a poor chance of filling the skep with combs at all unless fed. 3. Bees, if protected from wet and cold, will do better outside than in an outhouse for winter.

BRIGGS.—Both pieces of comb are badly affected with foul brood. It is now too late in the season to do more than remove from the hives all combs containing dead brood and burn them. Use naphthaline on floors of all hives as a preventive, and medicate any food required to be given.

J. EVANS (Llanengan). — *Honey Samples.*— 1. Very good clover honey. 2. Also good, but not equal to 1, and has honey in it from other flowers besides clover. 3. A very nice sample, almost wholly from heather. Saving for a lack of density, this would be a very fine honey.

E. B. (Swansea).—Yours is a very good sample of clover honey.

J. SHAW.—Comb is affected with foul brood. It is now too late in season to expect bees to build out sheets of foundation. If you could give them a few healthy combs, and bees are sufficiently numerous, they may take down 12 lb. of warm syrup from a rapid feeder, if given at once. This, with the addition of a large cake of soft candy, would carry them over winter. But if the bees are not fairly strong in numbers, it is very uncertain whether they are worth the attempt to preserve them.

D. ROBERTS (Tremadoc).—Brood in comb is "chilled," not foul.

H. DUDLEY ARNOTT (Great Yarmouth).—*Candy Cakes.*—The candy must be made according to some good recipe, or it will not be right for bee-food. As to thickness and size of cake, it is just a matter of convenience; moulded in an ordinary saucer it makes a good size. Instructions for using N. Beta in candy accompany each packet.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

SECTIONS WANTED. Good quality. State price. SMITH, 118, Villa-street, Lozells, Birmingham. F 41

WANTED, BEES. Exchange pure white Homer Pigeons. T. JELLINGS, 28, Bright-street, Coventry. F 39

HONEY WANTED. One to two tons pure English Honey in bulk. State lowest price to L. NOEL, 7, Soho-square, W. Payment deposit. F 40

BEES.—Six more STOCKS for DISPOSAL in skeps, 7s. 6d. each. Four in standard hives with or without hives. Purchaser to fetch them away. FREDK. T. FLETCHER, The Maples, Ottershaw, Chertsey, Surrey. F 43

FOR SALE, pure extracted ENGLISH HONEY at 8d. per lb., in 56 lb. tins. Tins and packing returnable. Samples 3 stamps. W. C. RANSOM, Great Barton, near Bury St. Edmunds. F 42

Prepaid Advertisements (*Continued*)

BEE TENT on HIRE. For terms, apply to G. GUNSTON, Bradley Green, Wotton-under-Edge.

THE SIXTH YEAR. — Healthy Driven BEES, with Queen, 1s. 6d. per lb. Package free. Young Queens, 2s. each. HOLDER, Wimborne, Dorset. F 32

WANTED, SECTIONS of HONEYCOMB (first quality). Prompt cash; packages sent. Any quantity. E. HURST, Bexhill, Sussex. 235

SECTIONS. — WANTED to PURCHASE for cash, Season 1894, best quality. T. SMITH & CO., 17, Cambridge-street, Hyde Park. F 35

LACE PAPER for GLAZING SECTIONS. Three neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. WOODLEY, Beedon, Newbury.

FERTILE QUEENS, bred by selection, 5s. Very prolific. Ordinary Fertile Queens, 3s. 6d. Post free. Safe arrival guaranteed. Rev. C. BRERETON, Pulborough, Sussex.

INDISPENSABLE to HONEY DEALERS. — HARGRAVE'S Folding Cardboard BOXES for 1-lb. Sections. Sample 3d. post free. HARGRAVE, Harrogate-road, Ripon.

MARKET for SECTIONS, EXTRACTED HONEY and WAX. State price and quantity. Prompt cash. Packages sent. Address, H., *Bee Journal* Office, 17, King William-street, Strand, London.

AYRSHIRE AGRICULTURAL ASSOCIATION'S

GREAT ANNUAL SHOW

At KILMARNOCK,

Friday, 26th October, 1894.

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GREAT HONEY COMPETITION,

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ENTRIES CLOSE FRIDAY, 12th OCTOBER.

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JAMES M'MURTRIE, Sec.

Ayr, 27th September, 1894.

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GOOD PINE PLANKS.

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VERY DRY, SOUND, CHEAP.

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MY LATEST PRODUCTION.—The "TILLEY" HIVE, made entirely on the principles laid down by Professor Tilley, and used in his extensive apiaries at Dorchester. The Tilley hive is no catch-penny article that the wind and rain will blow through, but is the cheapest, most substantial, and sensible hive now on the market, and when generally known is bound to be universally adopted. Note the price, 12s. 6d. complete. Painted three coats of best oil paint, and with zinc-covered roof. Every bee-keeper should send for my list.

RANDOLPH MEECH,
Broadwindsor, Dorset.

Editorial, Notices, &c.

USEFUL HINTS.

WEATHER.—The advent of October may be said to close the busy portion of the bee-keepers' year, because, no matter how fine the weather may be later, honey income is practically ended for the season, and there ought to be nothing to delay the final closing down of hives and bees for the latter's long winter rest. In this way, and viewing the effect of the weather generally so far as its influence on the amount of honey gathered in '94, we need not extend our observations beyond the six months between April and September, both inclusive, this period covering the whole time during which nectar is gathered by bees in any appreciable quantity.

There is no denying the fact that the past season has been, on the whole, rather unfavourable for bee-keeping than otherwise. A splendid start was made, April being an unusually fine month, but afterwards the weather became generally unsettled and characterised chiefly by lack of sunshine and frequent rainy periods. Consequently much disappointment was felt, especially because of the capital condition to which bees had been carefully and laboriously brought by their owners, only to wake upon a succession of dull, sunless days which yielded no honey.

An interesting article in the *Standard* summarises the main features of the weather during the six months referred to above, which, somewhat condensed, reads as follows :—

The mean temperature at Greenwich for the whole period of six months was 57·3 deg., which is 0·6 deg. below the average of 50 years (1841 to 1890), the deficiency occurring solely during the day hours. The greatest frequency of rain at Greenwich during the past summer was in July, when rain fell on 19 days, and in August it fell on 16 days. During the whole summer rain was experienced on 88 days, which is, roughly, one day out of every two. The greatest frequency of rain was 110 days, out of a possible 183, in the North of Ireland, and the next in order was 107 days in the Channel Islands, which was closely followed by 103 days in the south-west of England; the least number of rainy days was 87 in the Midland Counties.

The conditions which occasioned such frequent falls of rain necessarily obscured the sun, and the records of bright sunshine show a very great deficiency. In Westminster the sun was shining for 803 hours, which is 130 hours less than the average during summer for the ten years 1881 to 1890. The greatest deficiency was 39 hours in August, and in May there were 32 hours less than usual, while September was 29 hours below the average. The largest amount of sunshine in the British Islands occurred in the Channel Islands, where the sun was shining for more than 1,100 hours, and in the south-west of England it was shining for upwards of 1,000 hours. The least sunshine was in Scotland, Ireland, the North of England, and in the Midland Counties, where the amount was only slightly in excess of 800 hours, or approximately in fair agreement with the record for London.

In the face of our exceptionally adverse experiences in the south it has been quite a pleasure to find that so many readers have had a considerable amount of success in honey-gathering this year, bad weather notwithstanding, and it testifies to the condition of readiness for work to which the bees had been brought when we read of the large quantity of honey stored in the very few days during which the ingathering lasted. On the other hand, it is a suggestive commentary on the past season to find in our last week's issue no less than seven advertisements for honey against one offer of honey for sale.

PACKING BEES FOR WINTER.—It may seem rather late in the day to refer to the various methods of preparing bees for wintering, seeing that most hives are —or ought to be—already in winter trim. The subject is, however, of sufficient importance to warrant reference to it here, as being one on which divergent opinions will, no doubt, always be held; nor is there any reason why bee-keepers should not agree to differ so long as the object sought for is attained. The main points of difference are confined almost entirely to the question of ventilation and warmth while bees are in a more or less quiescent condition. Ventilation comes first, and usually resolves itself into discussing whether porous or non-porous materials are best for covering hives in winter. Some (the writer included) like non-porous quilts above frames, carefully covering down with American cloth—glazed side down—before adding the material for warmth over all. Others—quite as experienced —clear away everything which obstructs ventilation through the quilts. Others

again go so far in this direction as to use no covering at all close on to the frames, but allow $\frac{1}{8}$ in. free air-space between top-bars and covers all the winter. A fourth plan is to leave on for the winter an empty section rack, or a shallow surplus-chamber above the queen-excluder, the latter being used to keep the queen below. It is no use declaring that each or any of these several plans will end in failure, because there is indisputable evidence to the contrary, and, in the hands of their respective advocates they are known to succeed.

The explanation is simple, consisting chiefly in the exercise of ordinary intelligence, coupled with common sense, and some knowledge of the principles involved. If coverings are non-porous, ventilation must be secured from below; if porous, only a passage-way for the bees has to be considered, so far as the hive entrance goes. In other words, a certain amount of vitiated air, generated by insects as by humans, has to be got rid of, and replaced by a purer atmosphere from the outside during the time the bees are in a half-dormant condition. This condition is realised in winter, when no mechanical movement of the air within the hive is possible, as when bees themselves do the "fanning" in summertime, which so constantly purifies their dwelling. At such times, therefore, some other means must be adopted to secure the end in view. And so a space—temporarily provided for the purpose—below frames, and a free entry for fresh air by the doorway is all that is needed to make non-porous coverings answer, while, for such coverings as allow of upward or through ventilation, the admission of too much cold air in winter is prevented by a narrow entrance. In the same way, if ventilation is given by allowing free air space above the frames, care is taken to protect the bees from the effects of excessive cold and damp in frosty weather.

Correspondents frequently inquire "what covering do *you* recommend, porous or non-porous?" The reply is not so easy as it would seem; so many lateral considerations are there to take into account of which we know nothing, yet having so much to do with the nature of the reply that our querists should do a little of the thinking themselves to make our help of real use. To know the *reason why* a thing should be done in a certain way is a long step towards making the doing of it easy, but framing a reply to some questions which will suit all persons and all sorts of—to us—unknown conditions, is unfortunately beyond our powers. Whereas if our correspondents would make themselves acquainted with the principles underlying the various operations on which advice is sought, matters would be much simplified for them and for us.

PACKING DOWN FOR WINTER.—In attending to this, the final item of outdoor work for the year necessitating the opening of hives, we trust that no reader will fail to remove every comb found to contain dead sealed brood. Whether "chilled" only or "foul," none should be left in the hives, but taken away and burnt. This done, frame-tops must be scraped quite free from propolis, floor-boards have all debris removed from them prior to placing thereon a fresh supply of naphthaline, after which—and supposing a full supply of winter stores to be already on hand—the condition of every stock should be noted for future reference. Any scarcity can be remedied by the usual cake of soft candy, and a final fixing-up of coverings according to each one's notion of what is best, will bring us within measurable distance of the rest-and-be-thankful period.

THE LATE MR. F. R. CHESHIRE.

Mr. Cheshire, who has taken a more or less prominent part in the bee-keeping movement of the last twenty years, and whose death was announced in our issue of September 27 last, commenced his bee-keeping career in the autumn of 1871. He was a schoolmaster by profession, and being engaged to give a lecture on bees at a chapel in Hanwell, Mr. C. N. Abbott, who was the recognised bee-master at that time, and was living in Hanwell, was induced by the organisers to exhibit some specimens of the bees' work. Mr. Abbott took into the room a glass Woodbury hive with glass Woodbury super, full of bees and honey, all sealed, and in splendid condition. Mr. Cheshire apologised to the audience that he was not able to go into the question of bee-keeping, his lecture being on the bee as an insect, but he had no doubt that in what he had to say in regard to its power of producing honey he would be borne out by the great bee-master who had astonished him and delighted

the audience with so splendid a specimen of their work. Mr. Cheshire frequently quoted from Langstroth, from which his statements were taken, and stated openly that until he had seen Mr. Abbott's super that evening, he had never seen a super holding more than 6 lb., and did not think bees capable of producing any more, and he had never seen a queen until that evening. Mr. Cheshire was so struck with what he had seen, that he wished Mr. Abbott to set him up in bee-keeping the following spring, and arranged to have his first swarm of Italians, which was delivered to him on April 28, and from which he got, under Mr. Abbott's guidance, 54 lb. of super honey, and the next year they multiplied into six (BRITISH BEE JOURNAL, 1874, p. 27). Until 1874 he was a constant visitor at Mr. Abbott's house, and obtained all the information he could on the subject.

Mr. Cheshire was present at the first meeting of subscribers to the prize fund of the first bee and honey show held at the Crystal Palace in 1874, when it was decided to found the British Bee-keepers' Association. At the bee and honey show he exhibited several improvements in appliances, mechanically ingenious and, at that time useful, but which have since been much simplified. He also embodied several improvements in a hive which bore his name.

In 1879 Mr. Cheshire exhibited hand-coloured diagrams, enlarged by him from Girdwoyne's diagrams, published in French, and these the British Bee-keepers' Association purchased for the purpose of issuing in a cheap form.

In 1880 Mr. Cheshire and Mr. Hunter were requested by the committee of the B.B.K.A. to prepare the draft of a handbook for cottagers, which was revised by the committee, and issued as "Modern Bee-keeping."

Mr. Cheshire was a contributor to the pages of the BRITISH BEE JOURNAL, and was for some time, under Mr. Peel's editorship, on the staff, and answered queries relating to the scientific part of bee-keeping.

On the resignation of Mr. Symington as editor of the bee department of the *Country* newspaper in 1875, Mr. Cheshire took his position, and contributed a series of articles on bee-keeping, which were afterwards collected and published in book form as "Practical Bee-keeping," in 1876.

He was a member of the committee of the B.B.K.A. till 1881, and contributed the following papers read at the quarterly meetings of the association:—"Abdominal Distension in Bees during Winter" and "Honey as Food," both of which were issued as pamphlets.

In 1884, Mr. Cheshire, in conjunction with Mr. Watson Cheyne, investigated the origin and nature of foul brood, Mr. Cheshire doing the experimental part with the bees, while Mr. Watson Cheyne made the cultivations of the bacteria. Mr. Cheshire was engaged to communicate the results to the bee-keeping world through the British Bee-keepers' Association, which he did in a paper read before the members on July 25, 1884. In order to enable Mr. Cheshire to still further carry on his investigations, he was presented with an objective and condenser, for which £32 was subscribed by some friends.

In 1885 Mr. Cheshire commenced the compilation of "Bees and Bee-keeping," which was issued in monthly parts, and was subsequently published in two volumes, the first being devoted to the scientific part, and the second, published in 1888, to the practical part of the subject.

Mr. Cheshire was a fluent and prolix writer, but it was more especially as a lecturer that he was most in his element. He had a pleasant voice, a fluency of speech, an aptness for illustration, an elegance of diction, and such a mastery of the English language that he was never at a loss in holding the attention of his audience. It was because of his capacity for lecturing that he was appointed, on the recommendation of the chairman of the B.B.K.A. in 1880, to lecture on bee-keeping to the agricultural students at South Kensington. He was also frequently engaged by the B.B.K.A. to lecture for them, more especially on the relation of bees to flowers.

Since the publication of "Bees and Bee-keeping" Mr. Cheshire for a few months took charge of the Swanley Horticultural College, retired from the bee-keeping world, and devoted his lecturing powers to horticulture.

In 1890 he was engaged as lecturer of the National Temperance League, and up to the time of his death delivered 2,100 lectures in metropolitan schools, which were valued by the young people to whom they were addressed.

In 1893 Mr. Cheshire was elected an honorary member of the B.B.K.A. at their annual meeting, in recognition of his services to bee-keeping.

He was also a Fellow of the Linnæan and Royal Microscopical Societies.

SCOTTISH BEE-KEEPERS' ASSOCIATION.

The autumn exhibition of this association was held in connection with that of the Royal Caledonian Horticultural Society, in the Waverley Market, Edinburgh, on the 12th and 13th ult. The show was the largest yet held by the Scottish Bee-keepers' Association. The entries numbered 203, and, with a few exceptions, all were staged. The quality of the exhibits was, as a whole, very high.

The judges were Messrs. C. Carnegie, Marykirk, Montrose; R. Greig. Auchencrow, Reston; W. Wilson, Acrehead House, Dumfries; C. G. Meldrum, Manse of Logierait, Ballinluig; and T. Clark, Pleasants, Jedburgh, and their awards were as follows:—

Display of Comb and Extracted Honey.—1st, T. Kennedy-Newbigging, Stewart Hall,

Dumfries; 2nd, John McCreath, Dumfries; 3rd, J. & T. Henderson, Kilmalcolm.

Display of Honey, not to exceed 100 *lb.*—1st, William Hogg, Castle Douglas; 2nd, Sidney Roebuck, Dumfries; 3rd, John McCreath; h. c., Ross & Kerr, Dumfries.

Design in Honeycomb.—1st, Sidney Roebuck; 2nd, T. Kennedy-Newbigging.

Non-sectional Super, not exceeding 20 *lb.*—1st and 2nd, William Hogg; 3rd, David Cassels, Auchencrow, Reston; v.h.c., John Scott, jun., Langholm.

Non-sectional Super of Heather Honey, not exceeding 20 *lb.*—1st, Andrew Jamieson, Hopetoun, Bearsden, Glasgow; 2nd and 3rd, Thomas Turnbull, Bowhill, Selkirk.

Super not exceeding 10 *lb.*—1st and 2nd, William Hogg; 3rd, Wm. Scott, Burnmill, Lauder; h.c., Andrew Jamieson.

Super of Heather Honey, not exceeding 20 *lb.*—1st and 2nd, Thomas Turnbull; 3rd, Thomas Mitchell, Ettrick Bridge, Selkirk.

Twelve 1-*lb. Sections.*—1st, William Hogg; 2nd, Learmont & Gilchrist, Castle Douglas; 3rd, James Tindal, Fordoun.

Twelve 1-*lb. Sections Heather Honey.*—1st and 2nd, Thomas Mitchell; 3rd, C. N. Craik, Dalkeith.

Six 1-*lb. Sections.*—1st, Learmont & Gilchrist; 2nd, Andrew Stoddart, Carnwarth; 3rd, James Hogg, Penicuik; v.h.c., James Boyes, Auldgirth.

Six 1-*lb. Sections Heather Honey.*—1st, Andrew Boa, Biggar; 2nd, James Scott, jun.; 3rd, Nichol Dodds, Melrose.

Six 2-*lb. Sections.*—1st, William Hogg; 2nd, R. McNaught, Auldgirth.

Three 2-*lb. Sections.*—1st, William Hogg; 2nd, James Boyes; 3rd, R. McNaught.

Twelve 1-*lb. Jars Extracted Honey.*—1st, William Hogg; 2nd, Ross & Kerr; 3rd, J. Aitken, Back Lebanon, Cupar.

Twelve 1-*lb. Jars Extracted Heather Honey.*—1st, J. & T. Henderson.

Twelve 2-*lb. Jars Extracted Honey.*—1st, William Hogg; 2nd, Ross & Kerr; 3rd, Sidney Roebuck.

Twelve 2-*lb. Jars Extracted Heather Honey.*—1st, Ross & Kerr.

Three 1-*lb. Jars Extracted Honey.*—1st, Robert B. Sloan, Auldgirth; 2nd, J. Aitken; 3rd, William Hogg; v.h.c., Ross & Kerr; v.h.c., George Robson, Lauder.

Three 1-*lb. Jars Extracted Heather Honey.*—1st, John Turnbull, Lauder; 2nd, Nichol Dodds; 3rd, John Scott, jun.

SPECIAL CLASSES.

Three 1-*lb. Sections.*—1st, William Hogg; 2nd, Andrew Stoddart; 3rd, Ross & Kerr; v.h.c., John White, Toddington, Winchcombe.

Three 1-*lb. Jars Extracted Honey.*—1st, Owen Roberts, The Lodge, Rowton Grange, Chester; 2nd, W. E. Nutley, Dalton, Thirsk; 3rd, Rev. E. Charley, Chester; v.h.c., Joseph F. Williamson, Fleetwood, Lancs; v.h.c., Ross & Kerr; h.c., Richard Dodd, Tarporley, Cheshire.

Beeswax.—1st, William Hogg; 2nd, Mrs. Anderson, Banff; 3rd, John Scott, jun.

Honey Cake.—1st, Mrs. Colthart, Arbory Villa, Abington; 2nd, Miss Jenny Aimers, Viewfield, Melrose; 3rd, Miss Rankin, Crossland-crescent, Peebles.

Certificates of Merit (2) *for Confections containing Honey.*—Miss K. Chouler, Dalkeith Park, Dalkeith.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[2082.] Dull unsettled weather is the chief characteristic in this district, farmers have nearly gathered in their crop of corn, the fields are bare once more of the produce of the current year, and now our hopes and endeavours must be "vorwarts." Last autumn we began to fear our crop of honey in 1894 must be of small proportions on account of so much of the spring-sown grasses failing to germinate owing to the long drought, or, having germinated, dying from want of moisture. This autumn our hopes mount high when we walk through the fields and see the splendid plant of the grass crops, promising, if all is well, abundant forage for our busy labourers in the spring and summer of 1895.

This past season we had very little white clover; in fact, for two or three years our crop of white clover has been light, so discouraging to the farmers hereabouts that on one or two large farms they have planted alsike clover this year instead of the old familiar white clover. I hope the change will improve our chances in general, and my own in particular, as I am situated in the centre of the new (to us) honey plant, and according to replies in *Am. Bee Journal* as to the best honey plant, two-thirds of the prominent bee-keepers placed alsike clover in either the first or second place. This raises our hopes, and to get them realised we, too, must bend our endeavours to attain the

object we have in view. Now is the seed-time for next year's wheat harvest, and now is the time to lay the foundation of our success another year in things apiarian, therefore I would say don't neglect any of the necessary work in the apiary now. Have your stocks well fed and well housed; have the food placed near the clustering bees, or make provision for the bees to reach it. "Hill's device" is a very good one to place on top of frames of brood, then the quilt over it, and your chaff cushions on top, and if you have any anxiety as to the stores lasting-out a large cake of candy should be placed over the feed-hole of quilt before the final packing for winter.

I have heard of a few cases of robbing this season, but generally speaking the fault lies with the bee-keeper himself. I was at a bee-keeper's driving some bees for him in August; the morning was dull, bees quiet, and driving proceeding very well, when all at once there was a general uproar at the stock hives, and bees were coming and going in all directions, the neighbours' bees joining in the fray. I closed down my hives, tied a cloth around the junction of the inverted hive and that to receive the bees, and went to investigate the cause of the commotion, and found that the bee-keeper had placed the two hives I had already driven, and from which the honey had been removed, out for the bees to "lick out," as he termed it. It was only the work of a moment to carry the two hives alive with bees into the wood-house, close the door, leaving the bees to get out of any crevice they could find, and place two quite empty hives in their place in the garden; then, with a sprinkling of the entrances, the hurly-burly was nipped in the bud, but not before the neighbours were driven indoors by the excited bees, though I was thankful no one actually got stung. One of the weaker stocks had a persistent attack from the robbers, but I stopped this by a handful of long, dry grass lightly shaken on the alighting-board, and sprinkled with carbolised water. This last dodge I have proved a certain damper to the most impetuous attack of robbers; but after the bees are quiet for the day I always ascertain if the stock is weak or queenless, and act accordingly to prevent a recurrence of the robbing afterwards, when possibly I may be absent.

By the time this appears in print the Dairy Show, as far as the judging is concerned, will be over, though the show will still be on view at the Agricultural Hall. I trust to find a good number of exhibits in the honey department. There are classes for honey put up in a different form of package this year; something I hope which will develop the demand for extracted honey. As I am exhibiting in in both the new classes, I feel inquisitive to know what our bee-men and honey-producers consider "commercial packages." My own idea, so far, are the tins of the Self-Opening Tin Box Company, of King's Cross, London (who used to advertise in our columns some years back), their large tins have covers that are nearly the size of the end of the tin, therefore give better access to the contents be it liquid or solid. Last year I sent to Mr. Meadows, of Syston, for some 28-lb. honey tins. These have self-opening lids, but only a 4 in. opening in a 9 in. (diameter) end. This tin does very well while the honey remains liquid, but when the contents are solid with crystalised honey the larger opening of the S.O.T.B. Company's tins enables the contents to be cut out if required. Another point in the large opening is the ease with which they may be cleaned before refilling. The old-fashioned pots of our forefathers were useful, clean, and accessible, but fragile and breakable; tin in my estimation is preferable in every way to the old-fashioned red-ware pot. For small packages nothing is better than glass, but for quantities of honey over 3 lb. glass is not the best article, though its cleanliness and visual access of contents are beyond question. Therefore, in my humble opinion, we must depend on tin vessels for our commercial packages. There are many advantages:—1. The tins are cheap. 2. The railway rates are lower for honey in tins than in any other receptacle. 3. The self-opening tins give easy access to contents, so that the seller may prise up the cover and allow the purchaser to taste his wares before closing the bargain. 4. The tin covers, when forced down, exclude all air from the honey, thus protecting it from rancidity or fermentation, if it is in good condition when put in the tins.

But more anon after the show is over, hoping to meet many old friends thereat, renewing and re-opening friendships.—W. WOODLEY, *Beedon, Newbury.*

QUEEN-REARING.

THE RESULT OF THREE YEARS' EXPERIMENTAL WORK.

[*Continued from page* 395.]

Another, and perhaps the simplest, method for the unskilled hand which has occurred to me is what I call my plan of substitution. I start a queenless stock raising queen-cells on worker larvæ, and so soon as royal jelly is being supplied to the embryo queens I take the combs containing them to my work-room, get a frame of young larvæ from one of my best breeders, remove the common, or worker, larvæ, and substitute the larvæ from the selected stock, choosing, of course, larvæ of the right age to produce the best queens. The cells are then returned to the stock from which the comb was taken. Sometimes, if the season is right, I give the cells to a queened stock as before mentioned, and have had far finer queens than by any ordinary method. No hot iron or flame must touch the cells containing the young larvæ, or the con-

sequence would either be fatal or would probably so injure the inmate that the resultant queens would be imperfect and, in my opinion, worthless.

All tools, frames, cups, and other implements used should be kept in a temperature of 90 deg. for an hour or two before commencing to work; the wax is then soft enough to adhere firmly, by pressing any two parts together, without the application of any extra heat.

In preparing supers to receive the cells, it is necessary to place a frame or two of brood in the larval stage, sealed and unsealed, and some just hatching, if possible. My practice is to place one frame containing sealed and unsealed brood, and one of bees just hatching in the centre of the super; twenty-four hours afterwards the frame of cells is inserted so that when accepted we ensure a good supply of nurses in the upper chamber, and the nurse bees below soon discover what is going on, and come up too. Nurses, in my experience, generally know where they are wanted.

One or two incidents which should be here recorded, first, as showing the willingness of queened stocks of bees to raise new queens if only the proper conditions are brought about; and, second, the extent to which the above methods may be adapted to a variety of dissimilar circumstances, all tending to the end in view. When describing my earlier experiments, I always used the surplus chamber above a queened stock for raising queens, but as the work advanced, I had to press all the stocks in my possession, found to be in good condition, into service, amongst them a "Wells" hive containing two queens of my own raising in 1893. This hive has already been mentioned in a previous letter as having stored 40 lb. of honey at a time when some of my singled-queened stocks had to be fed. Well, in the shallow-frame super of this hive—over two queens in their prime—some of my best cells were raised—in fact, the very cells that secured me the medal at the Royal Show this year for my queen-raising exhibit.

Having been so successful in getting queens reared in surplus chambers, and bearing in mind some experiments I had carried out with good results in 1893, it occurred to me to try what could be done *under* a stock having a laying queen above. I therefore prepared a hive in which was placed two Standard frames of brood, with adhering bees from a strong stock, and at the same time I placed a frame of cells for acceptance, put on the excluder zinc, and over this set the hive—with its queen—from which I had taken the brood and bees, filling the vacancies with frames of foundation. On examination a few days afterwards, I found the cells accepted. I then transferred food and larvæ to the same, and had three parts of them converted into excellent queen-cells. This method entails a lot of heavy work and extra trouble, but very good and steady results can be obtained thereby.

Another method of raising queens in queened stocks came under my notice by accident or an oversight, but which I consider, when the *raison d'etre* is fully understood, will give excellent results. Perhaps I had better relate what actually happened, even at the risk of being considered long-winded. I had a stock which it was desirable to re-queen; the old queen was, therefore, destroyed, and one of my special cells given, which latter hatched out in due course a very nice queen, so peculiarly marked that I could easily recognise her. Then the weather went wrong, in fact, was very adverse, and I got anxious about fertilisation; so on June 13 I examined the hive, and behold my beautiful queen was nowhere to be seen. She was thoroughly searched for inside and outside of the hive, and I reluctantly concluded that she had ventured out and was lost.

The stock was full of young bees and strong, so I determined to see what sort of queens they would raise, in order to compare them externally and internally with those being raised contemporaneously in queened stocks. Accordingly I gave them a prepared frame of nine cups. On examination after forty-eight hours five cups were found on the road for queens. It must be understood that this frame of queen-cells was not in a super, but in the middle of the brood nest in the body of the hive. Three days before the cells were due to hatch out two of the now sealed cells were removed for use under the microscope, and on examining the grubs I was rather taken aback because of finding them in such excellent condition, and felt sure they would have been good queens. This being so, I determined to let the others mature. And therefore on the day prior to their being due the cells were intended to be cut out to give them to nuclei, but on removing the prepared frame I saw that all three cells left had great holes eaten in their sides and were empty!

The only way in which this could be accounted for was the assumption that there must be a queen somewhere here in the hive, and sure enough on the very next frame was my supposed lost queen, surrounded by as fine a batch of brood as need be seen, some of it capped over, too! And so the least expected had happened indeed. But, on consideration, the explanation was easy enough, and has been fully verified by me several times since. The virgin queen, through adverse weather, had been long in mating. Meanwhile, the bees in the hive becoming anxious, had, by way of precaution, started queen-cells (I have since found they always do this when the same state of things exists), and, on my giving them the prepared frame, had at once set to work to provide for the exigency of their young queen being lost on her mating trip. Why the cells were not ripped open before the last day I am not prepared to say, seeing that the queen must have commenced to lay about the

same time that these cells were sealed. Perhaps she was too busy over her own affairs to trouble about her immature rivals until there was a danger of their coming forth to assert their authority. It would not do to run the risk of raising all queens under these conditions; but it is worth noting as a subject for further experiment.

I have already raised the question whether queens ever deposit eggs in embryo queen-cells, and, if so, whether the bees would turn them into queens. Now, in order to test the latter part of this question, I several times transferred eggs to these embryo cells, but they were always removed. I went so far as to place the eggs in the cells on the day on which they were to hatch. I also added royal food, but always with the same result. Moreover, I have taken the young larvæ when only a few hours old, and placed them in prepared cups in royal food, with the curious result that some were removed, food and all, but where this was not so, I invariably had the food removed and the young grub not fed again for twenty-four hours, when royal food has been given it and good queens reared. So that I arrive at the conclusion that it is possible to choose larvæ which is too young. I also find on one occasion where eight larvæ just hatched from the egg were transferred, three were removed, and four ultimately re-fed, and afterwards developed into good queens. This leaves one unaccounted for, as to which my notes are silent, and I cannot remember what its ultimate destination was. I see my notes state "as nearly as I can fix the time the larvæ must have been thirty to thirty-six hours old before being re-fed."—HENRY W. BRICE, *Thornton Heath, Surrey.*

Erratum.—First two lines on page 395 should read: "surplus wax of adjoining cells from the sides of the chosen ones. Now place carefully," &c.

(To be continued.

THE "GARSTANG" HONEY PRESS.

[2083.] In reference to "H. C.'s" query (p. 399), I have one of these presses, but think it hardly fair to the maker to publish abroad measurements of its parts which, no doubt, have cost trouble and money in perfecting. I recommend "H. C." to apply to Mr. R. Barton, Garstang, the maker, for the plates he requires, or better, for the machine complete, the price of which I consider moderate, and suggest that this will prove his cheapest course in the end, both for the wood-plates, wire sheets, and iron-work, which latter has been improved and altered in strength under the test of experience.

The wood-plates are simple enough; the grooves are formed in a cheap and effective way, and spaced so that they allow thick honey to flow down them, and yet properly bear the wire sheets, and the thickness and quality of the wood should be such as prevents warping. It is a capital good press, and strong enough for anything. In fact, with fair usage and equal packing of combs, I think the iron-work might be lightened with advantage.—F. S., A LANCASHIRE NOVICE.

DEATH OF THE HON. SEC. OF THE HUNTS B.KA.

[2084.] It is with great regret that I record the death of the Rev. C. G. Hill, J.P., who for six years has been hon. sec. of Hunts B.K.A.

For some time Mr. Hill has been in indifferent health, but he returned from Matlock a few weeks ago in a hopeful spirit. A few days afterwards he took a chill, from the effects of which he never rallied.

It is indeed difficult to say in a few lines all that crosses one's mind about those who are suddenly taken from us, and it is particularly the case with me now that I write about our late friend. Mr. Hill, it may be said, was never tired of doing good.

The presence of all classes, hailing from all parts of the county—from the Earl of Sandwich to the poorest parishioner—at the funeral ceremony was testimony, if such were required, that Mr. Hill's loss was universally mourned.

As a bee-keeper he was known not only for the successful management of his small apiary of about a dozen hives, but for his advocacy of bee-keeping, particularly among the labouring classes; while he was ever bringing before those whom he met, ministerially or magisterially, the desirability of spreading a knowledge of such an interesting and profitable rural industry.

His latest effort in this direction was in writing from Matlock to the local papers at home, showing what was being done by, and asking for funds to carry on the work of, Hunts B.K.A.—C. N. WHITE, *Somersham, October* 6, 1894.

Queries and Replies.

[1173.] *Dealing with Driven Bees.*—I last week united three stocks which swarmed in July, and failed to find queens in either lot. I dare say in the driving and uniting, owing to its being my first attempt, I overlooked them. Will you kindly say (1) if there are any indications by which I may know the presence of a queen? I put the bees on eight frames, one with sealed honey, one empty, the others full sheets of foundation. (2) Was that right? (3) Where should I have put the frame of honey and frame of comb in the hive? I found no brood whatever beyond a few, very few, bees just leaving the cells. (4) Should there not have been brood, or had the queens ceased for this season? (5) How are the unsealed honey cells and the comb given to the bees in the hive to clean up? I am feeding with syrup over the frames, and supplying it warm as fast as it is carried down. (6) Is that right? (7) When should I look for a queen?

And if I find none, when should I introduce one, and how? (8) Can you help me in procuring a "94 fertile queen? Many thanks for former replies and in anticipation of your reply to this through the JOURNAL.—W. H. M., *Glastonbury, September* 26.

REPLY.—1. If the bees seem contented and quietly settled down you may fairly assume that one of the queens still heads the united stocks. 2. Partly so, but it would have been far better to furnish the bees with built-out combs. 3. In the centre. 4. Not necessarily. The lack of income has, no doubt, stopped breeding. 5. Pieces of comb containing honey may be given in a box set on a board above the frames, and giving the bees access to them through a small hole in centre of board. 6. Yes. 7. As soon as convenient, using a cage as directed in "Guide Book." 8 Consult our advertising columns.

[1174.] *Clarifying Honey.*—Can really good honey, which is spoilt by being rather dark in colour, be clarified without injuring its taste?—JAMES L. MAXWELL, *Highbury Park, September* 26.

REPLY.—We have proved by practical experiment that dark honey can be made perfectly clear and bright, but the process is too tedious and difficult to be of much commercial use. The best way to deal with such honey as is described by our correspondent is to allow it to granulate and use it so.

[1175.] *Bees Deserting Hive.*—I had not been near my hives for some days, but last week went to look if there was any honey in any of the supers, when I was surprised to find that one of my best hives was entirely empty, every bee having mysteriously disappeared! They had never touched the super, and below the frames were nearly quite empty of honey, but not quite. The frames were black at the bottom, but where the honey is left is quite good colour. Can you tell me the reason of the bees leaving? Also if it is any use keeping the frames, or should I just take the honey that is left. The hive gave two good swarms this season, the first swarm yielding about 30 lb. of pure heather honey.—GILBY EDWARD SONES, *Fort William, N.B., October* 3.

REPLY.—The most probable explanation is that, after swarming twice, the stock became queenless, and deserted the hive because of their inability to raise a successor.

[1176.] *Use of Phenol in Curing Foul Brood.*—Thanks for reply *re* foul brood. I destroyed the combs but retained the bees, and after four days on starters put them on *three* fresh combs, but expect them to die out unless strengthened by driven bees. On September 21 I cleared up my other hive for winter, but found it affected although strong in bees—perhaps from twenty to thirty cells with brown coverings per comb. Weather on 27th too cold to open hives with the idea of removing combs, as they require feeding up and will take the syrup. I have got some phenol from address given previous. The question arises, is it now too late to use phenol for curing foul brood, as given in Cheshire's book, 1 oz. crystal to 40 lb. syrup? I have 4 oz. c.; should this be dissolved in 1 oz. water, and *then in what* proportion of syrup? Kindly say in your next, and if there is any chance of ousting the disease by phenol at this time of year, or what best to do?—W. G., *Yorks, October* 2.

REPLY.—We have discontinued recommending *phenol* in bee food. *Naphthol beta*, besides being more effectual, is practically flavourless and odourless, and consequently is preferable. But it is now too late in the season to use medicated food for *curing* foul brood. All food given should be medicated as a preventive, but combs with cells containing rotting foul brood must be removed from the hive. So long as they remain the chance of cure is about hopeless. The instructions as to proportion of pure phenol in syrup are so carefully laid down in the work referred to that any one trying the method of cure there advocated must be guided entirely by what is stated by the author himself.

[1177.] *Heather Honey Press. Success at the Moors.*—Would you kindly give me some information through the medium of your journal as to the following questions:—1. What is the best form of press for squeezing honey taken from driven skeps and surplus frames from frame hives? I saw a cider-press used last year, but I did not think it at all satisfactory, as it left the honey rather cloudy. 2. Is it necessary to use a "honey-ripener" with treacle-valve for honey so obtained? This, I may explain, is a heather district, and in the latter part of the season I find that my bees fill up the brood-chamber almost entirely solid with honey. I don't want the frames of honey, but I am afraid that they are too well provided. A bee-keeper in this neighbourhood experimented with a hive last autumn by taking away all frames except two, and fed up on frames with sheets of foundation. Before the frost set in this hive was literally packed with bees, and came out in spring twice as strong as any hive in the neighbourhood. This year, after the honey flow was supposed to have ceased—that is, about a fortnight ago—he cleared off his section crates and took away several frames from each hive, renewing with frames fitted with whole sheets of foundation; what was his surprise on inspecting his hives the other day, to find the new frames drawn out, completed, and sealed, and he is now thinking of abstracting more frames from them—all this, mark, without any feeding whatever.—DUNCAN MCCOLL, *Rosneath, Dumbartonshire, N.B., October* 2.

REPLY.—1. The best machine we know of for removing heather honey from combs is the "Garstang" press. 2. No. Referring to latter part of your note, we are very pleased to print—for the benefit of bee-keepers within reach of Scottish moors—the very favourable account given of what has been done at the heather in your district; but we should not feel very safe in recommending for general adoption the plan of removing combs from brood-nest in autumn and compelling the bees to build out new combs on which to winter by feeding. It could only succeed in exceptionally favourable seasons, and might end disastrously.

[1178.] *Re-stocking a "Wells" Hive.*—I have lately had one of the two stocks in a "Wells" hive die off; the other stock is strong and healthy. Ought I to move a stock into the vacant half from another hive before the winter, so as to give the stock in the other half the warmth derived from an adjoining cluster, or should I wait till I have a swarm next year to put in, meanwhile filling the vacant half with a dummy, and other things to keep it warm?—F. C. HODGSON, *Twickenham, October* 4.

REPLY.—So far as keeping warm the stock of bees now occupying the "Wells" hive, there is no need to trouble on that score; but, on the other hand, if you desire to try the "Wells" system for honey gathering next season, the vacant compartment of the hive should be occupied without delay.

[1179.] *Feeding Driven Bees.*—A friend has given me two skeps of driven bees on ten worked-out shallow frames (empty). 1. If I give them 20 lb. of warm syrup, will they seal it for winter food, or is it too late? They have taken down a quart each day for the last three or four days. 2. Will it be best to give them some candy cakes in preference to syrup, seeing that it is so late?—J. E. R., *Berkhampstead, October* 6.

REPLY.—1. If the bees take the food so freely as stated, you had better continue feeding till they have taken the desired quantity—viz., 20 lb. If kept warm they will seal the major portion of it no doubt. 2. Only give candy if the bees stop taking the food before they have enough to winter on.

[1180.] *Re-queening a Doubled Stock.*—From something I saw in your BEE JOURNAL, of September 27, I came to the conclusion that one of my hives was queenless—the one about which I asked you in JOURNAL of August 23 (No. 1135). It is a two-storied hive; that is to say, the old hive was put over a new one of regulation size, because I wished to transfer the bees from a box of obsolete pattern to one of standard size during the summer. I could not, however, find the queen on the lower frames, and was, therefore, unable to make the transfer. A large quantity of bees were hatched out, and during the season I got more honey from this hive than from any of the others. I opened the hive to-day, and on removing the upper box found the lower frames had no honey, not many bees, and most of the frames had a great quantity of pollen in the cells. The upper box was heavy, and appeared full of bees, and also of honey, so that altogether I should say there were enough bees to cover six or eight frames. I could see no queen, and the presence of drones, as well as the empty appearance of the lower frames makes me suppose the queen has gone. I could not carry out the advice you gave. The combs in the old hive are built anyhow, and only by taking this box bodily away could I hope to get rid of the bees. Would you kindly give me advice. Shall I leave the two hives as they are, introduce a new queen between bars of the top one, and trust to there being enough food for the winter? If I could have got all the bees down on the lower frames—I have some six frames of comb I could have given them—and with feeding they might have weathered the winter; but this transfer s no joke, for the bees are not in the best of humour, and resented my interference to-day.—W. MONEY (Col.), *St. Asaph, October* 2.

REPLY.—By all means leave both chambers as they are for the winter. If it is certain the stock is queenless—and the presence of drones at this season warrants that conclusion—no time should be lost in re-queening. Next year the transfer of bees to the lower hive will no doubt be safely effected, and the upper story may be used as a surplus chamber, and removed when ready.

[1181.] *Queenless Stocks—Destroying Foul Brood Spores.*—1. A stock of bees with abundant stores appears to be queenless. Would you advise requeening now? 2. Supposing bees suspected of foul brood to be fed with honey instead of syrup, how many grains of dissolved naphthol beta should be mixed with one pint of syrup? 3. At what temperature does honey lose its peculiar flavour? 4. At what temperature would "foul brood" spores be destroyed by heat, assuming them to exist in honey?—Z., *Ruabon, October* 5.

REPLY.—1. If the bees have been long queenless, or if they are not fairly numerous (covering, say, four or five frames) they are not worth re-queening. In any case the best course would be to add a driven lot of bees with young queen to them. 2. Do not attempt to feed suspected bees with honey. Give sugar-syrup prepared as directed. 3. Well ripened honey kept air-tight will retain its flavour so long as it remains liquid. After granulation the flavour changes somewhat, though it does not lose its "peculiar flavour." 4. Scientists declare that the spores of bacilli will stand boiling without destroying their vitality. But whether this is so or not, we should on no account use honey from foul-broody hives as food for bees.

Echoes from the Hives.

North Lancashire, October 7.—The heather crop has not been good, and very little surplus stored. A splendid bloom and little rain, but the lateness of the heather season and the low temperatures spoilt both nectar secretion and bee work. One of my hives, on weighing machine, gained no weight the first week, ending August 22, and lost a little on the last week, ending September 25, the records of weights showing clearly the influence of warmer days and nights on increase. I got 29 lb. from my three hives, and full winter stores, dispensing with any feeding. Oddly enough, the weakest lot (though a fair one) with oldest queen, stored most honey by far, It came down home with brood on three frames, instead of on six as the others. The moral, perhaps, is that a prolific queen breeding late is not always best for the heather.—*F. S.* (*A Lancashire Novice*).

Bee Shows to Come.

October 9 to 12.—Dairy Show at the Agricultural Hall, London. Five classes for honey. Liberal prizes. For particulars apply to Wm. C. Young, Secretary, Dairy Farmers' Association, 191, Fleet-st., London, E.C. Entries closed.

October 26.—Ayrshire Agricultural Association's annual show at Kilmarnock. Great honey competition. Numerous classes, with liberal premiums. For schedules, apply Jas. McMurthrie, secretary, Ayr, N.B. Entries close October 12.

Notices to Correspondents and Inquirers

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

A. Rayner (Great Hockesley).—Bee sent, though not a pure Carniolan, is a well-marked hybrid (first cross).

W. T. E. (Ealing).—*Making Bee Candy.*—Neither sample of candy sent has been properly made, and consequently is not suitable for the purposes of bee-food. The maker should carefully read a proper recipe for making soft bee candy, and follow out the directions given, taking particular care not to over-boil it, and to keep it constantly stirred while cooling until it becomes quite stiff, before pouring it from the pan. If salicylic acid is used it must be stirred in after the pan is removed from the fire, as the acid acts upon the metal of which the pan is made, producing an oxide which may be injurious.

Wanderer (Norfolk).—Hereford has the reputation of being an excellent county for bees, and is fortunate in the possession of an active Bee Association, of which Mr. Alfred Watkins, Imperial Mills, Hereford, is the hon. secretary. Thanks for cutting sent.

Special Prepaid Advertisements.

Situations, Publications, Bee Plants, &c.—Up to Twelve words, Sixpence; for every additional Three words or under, One Penny.

TWO STOCKS of BEES with honey to SELL cheap. S., 22, Shelgate-road, New Wandsworth. F 44

WANTED, six good STOCKS in Skeps. State particulars, Thos. Sloane, Castlederg, Ireland. F 45

WANTED to EXCHANGE, two strong STOCKS of BEES in frame hives for Woodworking Bench. Wm. Hall, Flamstead, Dunstable. F 46

FOR SALE, several cwt. Pure Extracted HONEY. Good colour and quality. What offers? G. Reynolds, Eaton Ford, St. Neots. F 48

WILL EXCHANGE two Belgian HARES (prize strain) for two PULLETS (Minorca). Hy. Collins, Berrywood, Northampton. F 47

BEAUTIFUL HEREFORDSHIRE HONEY, in screw-capped bottles, and 4, 10, and 14 lb. tins. Sample 2d. Thos. Charles, Much Marcle, Glos. F 37

WANTED, SECTIONS of HONEYCOMB (first quality). Prompt cash; packages sent. Any quantity. E. Hurst, Bexhill, Sussex. 235

SECTIONS. — WANTED to PURCHASE for cash, Season 1894, best quality. T. Smith & Co., 17, Cambridge-street, Hyde Park. F 35

LACE PAPER for GLAZING SECTIONS. Three neat patterns, 100 strips, 22 inches long, 8d., post free. 500, 2s. 9d., post free. W. Woodley, Beedon, Newbury.

INDISPENSABLE to HONEY DEALERS. — HARGRAVE'S Folding Cardboard BOXES for 1-lb. Sections. Sample 3d. post free. Hargrave, Harrogate-road, Ripon.

BULBS.—Scilla Siberica, 2s; Grape Hyacinth, 1s. 6d.; Snowdrops, 2s.; Crocus, 1s.; Spanish Iris, 1s. 6s.; Daffodils, 2s. 6d.; Pheasanteye Narcissus, 2s. per 100; and many others cheap. Send for list. H. J. Sands, Harborne, Birmingham. F 49

BEE-KEEPING, its Excellence and Advantages. Price 3d. *British Bee Journal* and *Record* Office, 17, King William Street, Strand, London, W.C.

W. P. MEADOWS,
Syston, Leicester.

Unprecedented Success, ROYAL SHOW, Cambridge, 1894.
1st Prize—Collection of Appliances.
1st & 2nd Prize—Extractors.
1st Prize—Best Frame Hive.
1st ,, Best Cottager's Hive.
1st ,, Best Smoker.
1st ,, Best Feeder.
1st ,, Best Collection of Honey.
B. B. K. A. Medal Super Clearer.
Send for Cat—a—Log with Leaflet.

MY LATEST PRODUCTION.—The "TILLEY HIVE, made entirely on the principles laid down by Professor Tilley, and used in his extensive apiaries at Dorchester. The Tilley hive is no catch-penny article that the wind and rain will blow through, but is the cheapest, most substantial, and sensible hive now on the market, and when generally known is bound to be universally adopted. Note the price, 12s. 6d. complete. Painted three coats of best oil paint, and with zinc-covered roof. Every bee-keeper should send for my list.
Randolph Meech,
Broadwindsor, Dorset.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

Meeting of the committee held at 105 Jermyn-street, on Wednesday, 11th inst. Present :—T. W. Cowan (in the chair), Hon. and Rev. H. Bligh, W. Broughton Carr, W. H. Harris, W. J. Sheppard, J. Garratt, J. M. New ; the following *ex officio* members were also present, viz., Miss Eyton, Rev. W. E. Burkitt, Rev. E. Davenport, J. M. Hooker, P. Scattergood, and J. Huckle (Secretary). Communications were received from W. O'B. Glennie (Treasurer) and H. Jonas (Vice-Chairman), regretting their inability to be present. The minutes of the last meeting were read and confirmed ; after which the report of the Finance Committee for the month ending September 30 was received and adopted.

On the motion of Mr. Scattergood, seconded by the Chairman, it was resolved :—"That the committee have heard with great regret of the death of Mr. F. R. Cheshire, and desire to express their sympathy with Mrs. Cheshire in her great bereavement."

A letter was read from Mr. Alfred Watkins, hon. sec. of the Hereford Association, accompanied with the gift of a set of lantern slides, together with a printed lecture for the use of lecturers on bees and bee-keeping. Resolved :—"That the best thanks of the Association be given to Mr. Watkins for his handsome and useful gift."

The Educational Committee reported (1) The arrangements made by them for the preparation of the questions to be used by the candidates competing for second class certificates on the 26th and 27th insts., and the subsequent examination of the written papers. (2) The rules and regulations to be observed in regard to the granting of certificates for lectureships in bee science. Resolved :—"That the report of the Educational Committee be approved." It was further resolved that a syllabus be prepared, suitable for such examinations, and when completed to be communicated to the various agricultural and technical colleges throughout the United Kingdom.

Mr. Harris suggested that some steps should be taken to secure, if possible, a joint deputation representing dairy-farming, poultry-keeping, and bee-keeping being formed to wait on the Minister of Agriculture, with the view of obtaining Government support for these industries. The secretary reported that he attended the meeting of representatives of affiliated associations held at Shrewsbury on August 22, and that the following resolution was passed unanimously at that meeting, viz. :—

"That the British Bee-Keepers' Association be recommended to make application to the several affiliated associations for recommendations as to the formation of centres for examination of candidates for third-class certificates." It was resolved that the several recommendations made at the Shrewsbury meeting be adopted, and that the secretary do forthwith communicate with the affiliated associations in accordance with the foregoing resolution.

On the motion of Mr. Garratt, it was resolved that steps be taken towards arranging a meeting of representatives of the Southern, Eastern, and Home Counties Associations ; it was pointed out that whilst considerable activity prevailed in the Northern and Midland Counties many of the counties in the east, west, and southern portions of the United Kingdom were very deficient in regard to an organisation for the promotion of bee culture.

The secretary was requested to communicate with the "Royal Counties Agricultural Society" with the view of classes being arranged for hives, honey, &c., at their annual exhibition to be held at Bournemouth in June, 1895.

Other routine business was transacted, and the committee adjourned to Thursday, November 8.

CONVERSAZIONE.

The autumn conversazione was held on Thursday, the 11th inst., at 6 p.m., in the Board-room of the R.S.P.C.A., 105, Jermyn-street, when among the large audience of ladies and gentlemen present were the Hon. and Rev. Henry Bligh, Revs. W. E. Burkitt and E. Davenport, Miss Eyton, Messrs. T. W. Cowan, W. Broughton Carr, T. B. Blow, R. Brown, H. W. Brice, D. H. Durrant, J. Garratt, J. M. Hooker, A. S. Horlick, John H. Howard, W. P. Meadows, J. H. New, A. G. Pugh, W. J. Sheppard, P. Scattergood, G. Wells, W. H. Woods, C. Atkinson, and others.

Mr. Cowan (Chairman of Committee of the B.B.K.A.) presided, and briefly opened the proceedings by inviting any one present to initiate a subject for discussion, or to show any specimen bee appliance which would be of interest to the meeting.

Mr. Brown (Somersham) regretted that his "equaliser" had unfortunately got broken in coming up to town, as he intended to show it at the meeting. It consisted of a small box, the bottom being covered with queen-excluder zinc, and glass at top. In use it is placed over the two divisions of a double-queened stock, so that when one colony was stronger than the other—as in a "Wells" hive—and it was desirable to equalise them, the bees could pass over from one side to the other. He had found it answer very well, and help to prevent swarming. It also served as an indicator to show when supers should be put on.

Mr. Garratt asked what prompted the bees to pass over from the one stock to the other just as required? In reply to which it was

suggested that possibly the heat and crowding of the thickly-populated side caused it.

Mr. Brice inquired whether the transference of the bees was permanent or not.

Mr. Wells thought there was no doubt that the major part of the bees who left one side of the hive for the other returned to their old quarters. He did not think there was any rule as to which entrance they passed out at; probably as much one side as the other.

The chairman said that bees always went back to their original entrance. He remembered when using supers with separate entrances to them, the bees, though passing out that way, did not attempt to enter the supers from the outside, but always went to their original entrance.

Mr. Howard said immediately he saw Mr. Brown's "equaliser" he noticed that it would be valuable as an indicator for supering. There was no doubt that the bees returned to their original entrance wherever they flew from. He thought that the equaliser should be so placed as to allow of one-third being over the weak side, and two-thirds above the strong side of the hive, and he certainly was of opinion that it was worth an appliance manufacturer's while to take up the invention and give it to the public.

Mr. Garratt wished to know with regard to the "Wells" dummy whether the ordinary wooden perforation was the only practicable one, or whether a sheet of finely perforated zinc would meet the purpose. No doubt in many cases the dummy became closed by propolising.

Mr. Blow thought the fact of a dummy being of metal was sufficient to condemn it, as with them a cluster could not be obtained, which was eminently desirable. A thin wooden partition (a sixteenth thick) perforated with holes just small enough to prevent a bee passing through would not be propolised, whereas if the holes were made very small they were often quickly propolised. Another cause of propolisation was giving the bees too much room. If they were crowded as to the dummy, they did not attempt to propolise it. The metal dummy would do very well perhaps in the summer, but in the winter the bees would try to get as far away from it as they could.

Mr. Wells said a correspondent had written him to say that he had taken over 200 lb. of honey from a hive where a metal dummy was used.

In reply to an interrogator, Mr. Wells said that he pierced the holes in his dummy with a small bradawl, and then burnt them through with a hot wire $\frac{1}{8}$-in. in diameter. He had had no trouble with propolisation, but in any case the bees would not propolise the holes for several days, and after a week it would not much matter whether propolised or not, the partition being just as well solid as perforated.

In reply to Mr. Meadows, who asked how Mr. Wells found his bees cluster in the winter with the dummy he used, Mr. Wells said he simply put the dummy in and crowded the bees so much that they were obliged to cluster on it. When the cluster was once united he never found them to separate.

Mr. Howard thought that propolisation varied according to the district in which the apiary was situate. He had tried holes of many sizes, and came to the conclusion that bees would close any sized hole if they found no use for it. He had had this year experience of the bees propolising the whole of the queen-excluder spaces. No doubt where propolis abounded any sort of a dummy would be closed up. He contended that a hole $\frac{1}{8}$ in. in diameter would not prevent a bee getting through, and had proved it this year in sending a swarm away by rail in which zinc with that sized hole was used, and many of the bees escaped while at the railway station.

A gentleman stated that he had drilled two dummies with a twist drill, making the holes $\frac{1}{8}$ in. wide, and no bees had made their escape therefrom.

Mr. Howard said that in the case he had referred to, possibly the fact of the swarms being in confinement their efforts to pass through the apertures would be more pronounced than in a brood-nest.

Mr. Blow thought there must be some mistake about the exact size of the holes. He had conclusively proved that a bee could not get through a hole $\frac{1}{8}$ in. in diameter. He did not believe this depended on whether the bee was full of honey or not.

The Chairman said he had made many experiments years ago for the purpose of testing the proper size of the holes, and had used several hundred queens in the process. He was astonished to hear of Mr. Howard's experience.

Mr. Carr—referring to the propolising of the "Wells" dummy—thought it might be taken for granted that the best means to prevent propolisation in a perforated dummy was to crowd the bees on to the dummy, as it was a well-known fact that bees would stop up any aperture that admitted air except the entrance.

The Chairman considered the discussion a very useful one, as it tended to confirm one of the first principles of bee-keeping—namely, that the bees must be kept crowded in the hives. He agreed with Mr. Howard that propolisation varied with districts. When he had an apiary in Sussex the propolis there was very plentiful, and in autumn he had to remove all his quilts and substitute others, while in Cornwall his hives were scarcely propolised at all. This was because there was little or no propolis to be had in the locality, where very few pines existed.

Mr. Meadows exhibited his improved super-clearer. He said that in going over his apiary this season, and wishing to have cleaned up some frames from which the honey had been

extracted, he came to the conclusion that some improvement might be effected in the appliances hitherto used. He found that if a little piece of queen-excluder was placed over a circular hole in the clearer, and a cover of metal so made as to slip over this hole at will from the side of the clearer, the bees might be admitted to the latter from the brood-nest, and, after being allowed time to clean up the wet combs, be shut off from below, and so forced to return through the "escape." This would enable the bee-keeper to get a good many boxes of combs cleaned up by one stock, and that with almost no disturbance of the bees at all, because when the super-clearer was once put on it remained, and the bees were allowed to pass up into the boxes of combs as often as needed. The appliance referred to was then handed round for inspection.

(*Remainder of report next week.*)

HONEY AT THE DAIRY SHOW.

The nineteenth annual show of the British Dairy Farmers' Association took place at the Agricultural Hall, London, on the 9th inst. and three following days. The entries in the honey department showed an increase over those of last year; not a large one, it is true, but in view of the varying character of the past honey season, very satisfactory on the whole. In the class for twelve 1-lb. jars of extracted honey of 1894 thirty-six exhibitors competed, and, as is usual at this show, an exceptionally fine lot of samples was staged. It has been very correctly observed that "a commend at the Dairy Show is worth a prize anywhere else," and that this was the case at the show under notice, the large percentage of the total exhibits which received notice at the hands of the judges fully proved, no less than seventeen of the exhibits—all worthy of prizes if there had been prizes to give—in this class getting awards. It may be imagined how much labour was bestowed on a "sorting-out" of this kind.

The class for twelve 1-lb. sections, though not so largely filled as the foregoing, was also a good one, ten of the seventeen dozens shown receiving awards. The granulated honey class—also having seventeen entries—contained a pretty even lot of samples, not of the same high character as that for liquid honey, but still so good as to warrant several awards beyond the actual prizes for disposal.

The two remaining classes embraced an entirely new departure from the ordinary prize schedule, and were added with the view of offering facilities for opening up a prospective market, which it is hoped will be advantageous to both buyers and sellers of honey. The schedule reads thus :—*Class* 68. Extracted Honey, not less than 1 cwt., in 7, 14, or 28 lb. Commercial Packages, suitable for the wholesale trade." The importance of providing a package suitable for the *safe* transit of its contents by rail or otherwise, seemed to have been fully appreciated by several of the exhibitors in these classes, while others had apparently considered that so long as the honey was *staged* in a commercial package the requirements of the schedule were fulfilled. This was to be regretted, and we hope that another year the schedule will be so worded that no possible misunderstanding may arise; but the importance of the point was forcibly illustrated in the case of one exhibit, half the contents of one 28-lb. tin having disappeared on the journey to the show.

We do not know of any reason why an unnecessarily well got-up or expensive package or outer case for the usual strong honey-tin need have preference in the awards, but whatever is used to protect the tin should be staged in order to prove its effectiveness or otherwise. The prize exhibits of Mr. Brown and Mr. Howard were encased in strong wicker-work and wood-cases respectively, Mr. Brown having a padlock to each basket, and all capable of keeping the contents secure.

The duties of judging devolved on Messrs. W. Broughton Carr and J. M. Hooker, who made the following awards :—

Twelve 1-*lb. Jars of Extracted Honey.*—1st, Rev. T. J. Evans, Hargrave Vicarage, Chester; 2nd, F. Harper, Uttoxeter; 3rd, H. W. Seymour, Henley-on-Thames; 4th, Theodore Martin, Temple Cloud, Bristol; v.h.c., B. G. Brocklehurst, Ludlow; Wm. Woodley, Newbury, Berks; Miss H. Laurence, East Keswick, Leeds; O. Roberts, Rowton Grange, Chester; S. Eaton, Audlem, Cheshire; and L. Inwood, Uffington; h.c., C. Atkinson, Tockwith, York; W. Dixon, Leeds; G. Catley, Goxhill, Lincs.; and F. Gravil, Cardiff; c., H. Wood, Lichfield; F. H. Brenes, Brentwood; and W. Lee, Southwell, Notts.

Twelve 1-*lb. Sections.*—1st, Wm. Woodley; 2nd, J. Sopp, Wallingford, Berks; 3rd, L. Inwood; 4th, J. Stone, Sudbury, Derby; v.h.c., R. Brown, Somersham, Hunts; h.c., E. C. R. White, Salisbury; W. H. Woods, St. Ives, Hunts; and A. Woodhead, Goole, Yorks; c., H. W. Seymour and E. J. Giddy, Welton, Yorks.

Twelve 1-*lb. Jars Granulated Honey.*—1st, J. Thomas, Hereford; 2nd, E. C. R. White; 3rd, F. Harper; h.c., Miss E. Chester, Waltham, and Theodore Martin; c., O. Roberts and J. Sopp.

Extracted Honey, not less than 1 *cwt. in Commercial Packages, suitable for Wholesale Trade.*—1st, R. Brown; 2nd, J. H. Howard, Holme, Peterborough; v.h.c., C. Atkinson; h.c., Wm. Woodley.

Extracted Honey, not less than 28 *lb. in similar packages to above.*—1st, J. H. Howard; 2nd, H. W. Seymour; h.c., C. Atkinson and Lieut. H. C. Hawker, R.N., Longparish, Hants.

We cannot close our remarks on the above show without saying how much the thanks of

the British Bee-keepers' Association are due to those bee-keepers—outside the ranks of the members of the committee duly appointed to act as stewards in charge of the special annexe attached to the honey show proper—who so kindly volunteered and gave their services, at much personal inconvenience, to the interests of the British B.K.A., and for the help of bee-keepers who came for information to the honey section of the Dairy Show. It would surprise many to know how numerous were the inquiries and requests, and how much would have been wanting had the kindly and timely assistance of those who thus helped at the B.B.K.A. annexe been lacking. "We have just started," or we are "intending to begin bee-keeping," was uttered by so many of the visitors at the annexe, that it afforded undoubted evidence of the increasing interest in bee-keeping, and of the fruit that is being borne as the result of the B.B.K.A.'s late efforts to bring British honey into notice. It only shows what may be done at these big shows to help the honey industry and bee-keepers where this cheerfully accorded co-operation can be obtained. Most valuable experience has undoubtedly been gained by this new if expensive departure of the British B.K.A. Their annexe with live bees in observatory-hive—the honey and honey-vinegar and mead samples, as honey products, pamphlets, &c.—stood in relation to the honey industry in much the same relation as the churning operations at the show bore to the milk industry—the churning showed how butter was made—and the B.B.K.A.'s annexe showed visitors how "honey" was obtained by exhibiting interesting objects connected with the hive, not usually seen by the bulk of those who come to the Dairy Show.

But chiefly thanks are due to those exhibitors who, at considerable expense and labour, sent exhibits which reflected admirably the merits of British honey and British bee-keeping.

Men who send exhibits to such a strong competition possess a large measure of public spirit greatly to be commended and encouraged. Without such exhibitors how could the British Bee-Keepers' Association have demonstrated the importance of the native bee-keeping industry? The British B.K.A. annexe would have been meaningless, comparatively speaking, but the two combined, *i.e.*, the honey section and the B.B.K.A. annexe, helped the general well-being, because the visitors were able to see native honey there in perfection, and then at the adjacent stall they saw the live bees and appliances, and the *modus operandi*, in a way that interested them immensely.

Messrs. Howard, Brice, Brown, New, Greenhill, and others all helped to make the meeting a success, and, no doubt, did not a little to make future bee-keepers of many who only went to look on.

Special thanks are also due to the exhibitors, and may their honey be found at the "Dairy" for many seasons to come, and may the number of these public-spirited bee-keepers be greatly increased. We hope the funds of the B.B.K.A. will allow of a further and extended effort next year to help bee-keepers, who meantime must not forget that space at the "Dairy" is costly, and heavy expenses they scarcely expect are necessary for even such a modest display as the B.B.K.A. annexe.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

QUEEN-REARING.

THE RESULT OF THREE YEARS' EXPERIMENTAL WORK.

[*Concluded from page* 407.]

The preceding portions of this article may be said to contain a brief *resumé* of such experience as has been acquired in carrying out a course of experiments (not a few still incomplete) having for their object the gathering up of all that is good in many methods of queen-raising, and adding thereto such improvements or alterations of my own as have, in practice, seemed to me desirable. The results have been given to readers of the B. J. in fulfilment of a promise, and although I fear that too much of your valuable space has been occupied in the endeavour to place my experiences on paper, I am not without hope that —when my experiments are further advanced —I may be allowed to resume the interesting subject. In a word, I shall go on trying to make my practice as perfect as may be, and "tell it out" to readers, if your pages are, as in the past, open to me.

There are, however, one or two matters upon which readers who are so inclined might bring their minds to bear, and publish the result of their observations for the general good. I enumerate them as follows :—

1. Why are queens bred late in the season of a different colour to those bred during the natural swarming time?

2. Why is it that there are two sorts of

drones in a hive at one time (different in shape)?

3. From whence really comes the little black, shiny bees which are found in all hives at certain seasons of the year?

4. What is the—no doubt—far-seeing purpose which causes the change in the appearance of the worker-bee as the winter approaches?

I mention these particular points—not yet satisfactorily cleared up—from a long list now before me which go to prove that the mystery of the bee-hive is still unsolved, and that there is a wide field of research for inquiring minds. I have certain data on all these queries, and have also some not quite definite theories as to the relation of queens and drones, but as yet no actual facts to warrant a positive assertion. We think lightly of the "cumbrous, lazy drone," but the full part he takes in the economy of the hive is not yet ascertained, and, to my mind, until this is known, and the drone is made an equal object of study with our queens, we cannot expect to attain the highest results in our craft.

I well remember on one occasion making up a small nucleus in which a queen-cell was affixed, and in this nucleus there was not a single drone; but about the eighth day after the queen had hatched I counted over 200 drones enter that hive, the noise and excitement at the entrance being something to remember.

I must not omit mention of another series of experiments made for the purpose of settling in my own mind the question as to what were the best bees for all purposes. I took the common native Black or German bees, Carniolans, Italians, and Cyprians. These last may be at once dismissed from consideration, as I found them vicious, delicate, bad winterers—in fact, possessing hardly a virtue to recommend them save, perhaps, the beauty which is but skin deep. The Carniolan I found the best-tempered bee of the lot, and for those who desire increase or swarms it is no doubt the best of all bees, but for honey-getting, combined with good all-round qualities, I consider them far behind either Ligurians or Blacks. Both the latter-named bees seem to me to possess qualities which, if combined, would produce a first-rate all-round bee. If the desire to swarm could be eliminated, the Italians, according to my experience, possess most virtues. I find them industrious, hard-working, good-tempered, disease-resisting, and excellent winterers, storing honey and breeding after the Black bee has shut up shop for the season; but they swarm more than the Blacks. I don't say *pure* Blacks, because there is an insurmountable difficulty in obtaining Black bees without more or less either of the Carniolan or Ligurian element in them, the Carniolan so largely dominating as to give them an inherent desire to swarm almost equally with pure Carniolans. Black bees, when only slightly tinged with foreign blood and properly managed, are very satisfactory to keep—equal to any other bee that has come under my notice. Having arrived at this conclusion, I tried several crosses, and the best result obtained was from a hybrid composed of two parts Ligurian and one part Black, which produces a bee possessing all the good qualities of the former without the desire to swarm and spread out all over the ground in swarming, as the pure Ligurian so often does.

From a known pure strain of Ligurian bees the first queens were raised; these were crossed with as nearly pure Black drones as I could get, and from the resultant bees were reared the final queens. Great care, however, must be taken to get them mated to pure Italian drones, strangers in blood to those that raised the first queens. This done, I venture to say you will have bees eminently satisfactory on all points—in fact, a bee that will make the heart of the honey-producer rejoice. Of course, the desire to swarm cannot be bred out entirely, but excessive swarming is certainly eliminated, and, in my experience, they seldom raise more than two or three queen-cells at the best of times, and often not more than one.

As tending to show the vitality of the larvæ, after they have passed into the final stage —viz., after the cell is sealed and the cocoon has been spun—I removed one cool evening three queen-cells and placed them beneath my vest in a small padded box, to allow them the warmth from my body. They were taken a two and a half hours' journey by road and rail to the house of a friend and placed on the combs of three nuclei which he had ready to receive them. On examining a comb in one of the nuclei I found a capped queen-cell. I cut this out and placed it in the position lately occupied by the three cells I had brought, and on arriving home three hours later I slipped it in between the top bars of a queenless stock. All four of these queens hatched out, were duly mated, and are at the heads of stocks now doing well. I merely mention this to show what can be done by studying a few elementary principles and exercising care.

I must now bring my long story to a close; I have encroached largely on your valuable space, and, perhaps, on the patience of my readers, although the subject is by no means exhausted. I feel that enough has been said for one sitting. I say this, and reserve something for the future, because I know how easy it is—even with the most carefully-conducted experiments—for one to become impressed with a wrong conclusion, especially when appearances seem to favour the wishes of the experimentalist. This seems to be the case in bee-keeping more than in any other avocation or hobby with which I have had to do. It is easy enough to correct a mistake; but where is the one who, after having stated a thing as a fact, cares to climb down and admit he is wrong? We all have to do something in this

line at times, and the man or woman who does this gracefully and admits an error without equivocation, is the one I should think most highly of. "To err is human; perfection is for the gods:" but our "facts" should be carefully verified by repeated proof before stating them as such in print, and thus causing perhaps much inconvenience and disappointment to others by our carelessness in not making doubly sure that "things are what they seem." Anyway, I have endeavoured to speak of things as I found them, and have tried to avoid the belief that "all my own geese are swans." Practical experience is what I attach value to. Theory is often very pretty, but solid facts are incontrovertible, and to my mind one of these facts is that the raising of queens by scientific methods is the keystone to successful apiculture in the future.—HENRY W. BRICE, *Thornton Heath, Surrey.*

DEALING WITH FOUL BROOD.

[2085.] It may perhaps interest some of the readers of the B. B. JOURNAL if I give my experience with foul brood this season. It may be of some little help to those who are unfortunately troubled with it, as I fear a good many bee-keepers are. Two or three years ago it existed about two miles away, which caused me to fear it might reach here. I have had several lots of driven bees yearly, but can form no idea where the disease came from. The following are some notes of my treatment:—This spring I scarcely examined my bees, except to see they were not starving, until May 10, when I noticed two or three hives not working much. I had about twenty stocks standing near to each other, including three on the "Wells' system." I found No. 12 badly affected, so I burnt the bees, bars, brood, and quilts, and disinfected the hive. I next sent off for some naphthaline and naphthol-beta. May 18, I examined Nos. 4 and 15, both of which looked suspicious by not working, and found them bad. I, therefore, burnt the brood combs of each, and fed No. 4 with carbolic, 1½ drachms to 3 lb. of food. No. 15 with naphthol-beta, 9 grains to 3 lb. of food. This I poured on the empty cells. I then obtained some of McDougal's disinfectant carbolic, and used about three tablespoonfuls to one pint of water, and, with a paint-brush, used it on the frame-ends, round the inside of hives and floor-boards, and for our hands, the smoker, or anything else employed amongst them. I still keep it at the hives, continually renewing when necessary. I then examined carefully all the hives, and found several more or less affected. I gave naphthol-beta to each in the food, and used naphthaline in the hives. May 25, I found in No. 4 some clean young brood. Again fed with carbolic, 1½ drachms to 3 lb. food. In No. 15 found some clean, healthy brood. Fed with 9 grains naphthol-beta to 3 lb. food. May 28, fed again, but found one or two diseased cells. On this date the bees were gathering scarcely anything, so went on feeding the lot—half with 2 drachms carbolic to 3 lb. food, pouring it on the combs; the other half, in the same way, I gave 9 grains naphthol-beta to 3 lb. of food. Most of them were fed twice in this way. June 18, the expert and I examined Nos. 3, 4, and 15, and found them still affected. June 24, No. 3 swarmed; I took the bees and bars out of the hive and painted it over with strong carbolic, put in nine fresh bars of comb and one bar of fresh brood containing also a queen-cell; I then returned both bees and swarm, having found and destroyed old queen. Many of the bees joined No. 4, through the hive smelling so strongly of carbolic. They, however, reared a queen, and I have found plenty of brood, but not any disease. June 24, I had most of my top boxes on, so could do no more doctoring.

Most of them did fairly well, considering the scarcity of white clover here. August 5, took top box off No. 4. I thought it a little diseased below. Examined No. 3; it appeared to be quite clean. I was recommended to use phenyle manufactured by Morris, Little, & Son, sold by most chemists. I have seen it also recommended in the guide book. I have also read Simmons's and Cheshire's books on foul brood. August 5, again examined No. 3; thought them quite clean. No. 4 I found a little diseased; I sprayed it with phenyle (13 drops to 8 oz. water). I use it first on the bees and bars, then shake off the bees and spray thoroughly the bare combs. The bees are, with the spraying, almost as quiet as flies, and I can recommend it to any one for manipulating with, except for taking honey, which it might flavour. During the season I have found two-thirds of my stock affected, but this autumn I have frequently sprayed, and have punctured all foul cells I could find with the point of a stick continually dipped in a solution, half carbolic and half water. September 1, I shook bees from combs of No. 14 into a straw skep for two days, then put clean boxes into a clean hive, and poured on the combs 2 drachms carbolic to 3 lb. food, then returned bees. So far, they appear clean. I took the queen from No. 9 while it was affected. They reared another, and she has bred all right; but again finding several affected cells I shook the bees into a skep for two days, then took away the queen, which was reared in the affected hive, united the bees with a driven lot, put on eight clean frames, and fed with medicated food: 2 drachms carbolic to 3 lb. food. The other queen I kept for two days, and on September 20 joined her to another queenless hive, being desirous to know whether her brood would be affected or not. October 5, I examined these, and found a nice patch of sealed and unsealed brood, but could not detect any foul brood. I have been at a

great deal of trouble, spraying with phenyle, washing the hives with carbolic, pouring medicated food on the combs, and injecting carbolic into every sealed cell that I found without brood, and I hope that I have now succeeded in getting them clean, although I must wait until spring to prove it.

What I would recommend to others finding a hive badly affected—burn all but the hive. The bees may be saved if shaken into an empty straw skep for two days, then put on clean combs and fed with medicated food. If one or two bars only are slightly affected, take them away. If one or two cells are found affected, puncture each cell with a match dipped in half carbolic and half water, then spray the rest with phenyle, 13 drops to 8 oz. of water. In manipulating my bees I have treated each hive as though affected.—J. WILSON, *The Gardens, Langford Hall, Newark.*

THE BEEHIVE AS AN INCUBATOR.

[2086.] I enclose a cutting from the *Feathered World* of September 21. Here, surely, is new capital for the enterprising bee-keeper. He can hatch out eggs for the neighbouring poultry-keeper at so much a dozen; or, if a poultry fancier himself, may save the cost of an incubator.

My brother breeds game bantams, and gets a lot of eggs (generally thin-shelled, often shell-less, he does not sit these latter) broken by the hens, and next year we are going to try the new plan.—HAROLD TWENTYMAN, Hon. Sec. Staffs. B.K.A., *Castlecroft, Wolverhampton, October* 13.

"In the columns of my German contemporary, the *Geflugelborse*, Herr Vonhausen gives some interesting details of the utilisation of bees for hatching purposes:—'Starting from the idea that in a continuous heat of from 86 deg. to 90 deg. Fahr., with a steady influx of atmospheric air, containing a certain amount of moisture, it should be possible to hatch eggs, Herr Apel, at Stadtlaningen, concluded that the hatching process could be done by bees, or rather by the warmth generated by them in their hive. A bee establishment consists of two principal parts: the breeding-room and the honey-room. The former is immediately above the door of the hive, and receives the outer air, warmed by thousands of bees in their entrance and exit. The moist warmth thus created culminates in the honey-room above the breeding-room, where it is necessary to keep honey fluid, and where it cannot easily escape. Herr Apel took the temperature of this room, and found that it was always from 86 deg. to 90 deg. Fahr., with very slight variations caused by the atmospheric heat and cold. A peasant on his farm killed a partridge in mowing. Eighteen eggs were found near the dead bird, and given to Herr Apel, who immediately used them for his experiments. First of all he pushed a board, perforated with pin-holes, between the breeding and honey room to keep the bees away. He then deposited the eggs upon the board. Now, partridge eggs require twenty-six days for hatching, but the clutch in question had evidently been set on by the partridge, for on the fourteenth day sixteen healthy young partridges broke their shells; two others contained dead birds. Herr Apel thinks their deaths may have been caused by the eggs not being turned. A second attempt, when twelve eggs in an advanced state of hatching were taken from under a partridge, all the chickens came out on the sixth day. All these youngsters were given a hen for a foster-mother, and developed satisfactorily. When this new method of hatching eggs came under my notice I at once laid fifteen bantam eggs into a beehive. The result was twelve healthy chickens, three eggs were clear. It would be of advantage to use a wire frame, instead of the board, to deposit the eggs on. Very often a hen will leave her eggs, or die before they are hatched. On such occasions the hatching by bees might come in useful, especially as it is not expensive, gives ready help in a case of need, and has practical value.' Herr Vonhausen's contribution has certainly the merit of novelty, but what have bee-keepers to say to this fresh labour entailed upon their industrious pets?"

GLASS *V.* WOOD COVERS FOR HIVES.

[2087.] I should like to thank "W. R. N." (2081, p. 397) for the idea of using glass as a hive cover. I think glass covers for supers and section-racks may be of great assistance to the bee-keeper. I have already made a glass super-cover. It does not take half an hour to construct if made with a saw-cut and the glass slipped in, which is one advantage. I have a few combs to clean up, and shall use the glass cover, but of course I cannot test it properly till next summer. But I see no reason why it should not answer splendidly. I fear all my wood super-covers will have now to retire to the museum. They have served me well for six years, so it is time now they were superseded by an improved cover. This spring I said to my head female foreman "By next year we will have some glass covers for our supers and crates." We find sheets of glass most useful in the apiary. Our July super-clearer has a glass cover, and it clears the combs in about an hour. Our June clearer does not require a glass cover, and works better without one.

I don't think glass will be found a good material for wintering bees under. Of course they will winter under it, and for experimental purposes it might be most useful. But glass has for this purpose two faults, it is non-porous and a great conductor of temperature. I think a wood cover is more comfortable for the bees; and, as the bees should

not be disturbed in any way during the winter months, a glass cover as a regular cover would be of no advantage.

On referring to the B.B.J. I see I advocated wood covers (or crown-boards, as they were then called) as far back as December 20, 1888 (letter 1928), and again in letter 2395, December 12, 1889. In the first letter I said: "I consider the covering of a hive the most defective part of the hive, and greatly needs improvement." And I am of the same opinion still. One fault alone, its murderous propensities, condemns the quilt, in my opinion. I am quite sure more bees in England are now smothered slowly to death by the quilt than by the brimstone pit. I have seen a bee-keeper myself imprison quite a number of bees under the quilt, and, when I asked how the poor creatures were to get down into the hive, his reply was they must get down as best they can, which was equal to saying they must remain there and die.—R. T. SHEA, *Southend.*

EXPERIENCE WITH A "WELLS" HIVE.

[2088.] On May 18 last I put a lot of bees headed by a young queen into one department of a hive on the "Wells" principle—the hive was the same size, I think, as Mr. Wells has been in the habit of using, viz., one holding fourteen standard frames. On June 3 I put a swarm into the other compartment; a few days afterwards I noticed the queen outside the hive, and I watched her for some time, when she entered again; on the 14th I examined this side of the hive, and as there was no brood I was sure the queen was dead, and therefore I put in another swarm, which seemed to settle nicely, but soon I noticed on this side of the hive work was carried on in a half-hearted manner, while the other side worked whenever there was a chance, which was not often, most assiduously. I had placed fourteen shallow frames above the excluder zinc, and from these I took some honey. I had not time to examine the hive thoroughly until the beginning of September, and I then found one side of the hive full of bees and in a prosperous state, while in the other there was not a single bee or a drop of honey—the only result is some nicely worked out comb. Now I should be greatly obliged if you can account for this state of things. The bees could not pass from one side to the other, and they seemed to work harmoniously in the super of shallow frames in the early part of the season. The hive is placed north and south, and it was the north end that was deserted. Do you think in this dull season the bees in the north became so disgusted that they betook themselves to the "sunny south"?—A. P. J., *Norfolk, October* 8.

[It seems clear that the bees joined forces in one brood-chamber because of some mishap to the queen of the deserted compartment. —EDS.]

IRISH BEE-KEEPERS' ASSOCIATION.

The committee met on 9th inst., Mr. Gillies in the chair. The following resolution was passed unanimously:—"The Committee of the Irish Bee-keepers' Association takes this, the earliest available, opportunity of recording its sense of the loss the association has sustained by the sad death of its respected treasurer, Mr. John Edmondson." Mr. Henry Chenevix, of 15, Morehampton-road, Dublin, was elected hon. treasurer, while still retaining his office of hon. sec.

WEATHER REPORT FOR SEPTEMBER, 1894.

WESTBOURNE, Sussex.

Rainfall, 3·19 in.	Brightest Day, 10th, 11·1 hours.
Heaviest fall, ·76 in. on 25th.	Sunless Days, 6.
Rain fell on 12 days.	Below average, 24·7 hours.
Above average, 1·19 in.	Mn. Maximum, 58·8°.
Max. Temperature, 67° on 1st.	Mn. Minimum, 46·6°.
Min. Temperature, 34° on 29th.	Mean Temperature, 52·7°.
Minimum on grass, 28° on 29th.	Maximum Barometer, 30·70° on 30th.
Sunshine, 140·2 hours.	Minimum Barometer, 29·83° on 25th.

L. B. BIRKETT.

METEOROLOGICAL SUMMARY.

SEPTEMBER, 1894.

Locality, Stoke Prior, Worcestershire.

Height above sea-level, 225 ft.

Rainfall, ·98 in.; heaviest fall, ·30 in. on 22nd.

Rain fell on six days.

Max. shade temp., 67° on 1st and 11th.

Min. temp., 30° on 27th and 28th.

Max. shade temp. at 9 a.m., 61° on 1st.

Min. temp. at 9 a.m., 40° on 27th.

Frosty nights, two.

Max. barometer, 30·35 on 13th.

Min. barometer, 29·55 on 25th.

This month remarkable for its light rainfall. The smallest for September the last sixteen years.

Barometer high during most of the month.

Wasps very plentiful, and bees also greatly inclined to rob. PERCY LEIGH.

Queries and Replies.

[1182.] *Preparing Hives for Winter.*—In examining one of my hives during the last week in September I found several queen-cells—some fully built, some partly built—which I cut out. I had seen the queen recently, but since removal of the section-box I had not noticed these cells before, although I had examined the hive several times since I removed it. This was a strong swarm early

in May, hived on full sheets of foundation; they worked well, and would have filled a second section-box of 21 lb. had weather been right; as it was, they only partly filled them. A strong swarm I had from another hive in May did nothing in the section-box, but had their brood-chamber tops of frames a little stored with honey, showing they were very inferior workers to first lot, although the first swarm had no honey whatever in brood-chamber, and have had to feed them up. How are the hives best cleaned up—by bodily lifting hives on to a temporary floor-board, or by lifting each frame out and placing into a empty hive? I fear if we attempt to lift them bodily it will dreadfully shake them. There is a quantity of rubbish to clear out from them biting the quilts, quite a lot of fluff and scraps of wax. Again, the propolis to be scraped from frame-tops; how is this to be best done? The bees won't like that, I am sure. Kindly advise a novice, who does not mind a few stings.—L. T. BADCOCK, *Bexhill-on-Sea.*

REPLY.—The hive must be lifted on to a temporary floor while clearing away all débris. If quietly done on a cold day not a bee need take wing. Scrape the floor-board well, and before returning the hive to it place thereon a few pieces of naphthaline. The frame tops are cleaned by first driving the bees below with a few puffs of smoke and rapidly scraping off the propolis with the back of a knife or, preferably, a proper spatula made for the purpose. For a novice, it is well to have an assistant who will keep the bees down by giving a little smoke if they come up to annoy the operator. Then, when all is scraped off, pass a brush rapidly over the frame and replace the quilts.

[1183.] *Bees Working on Ivy.*—During last week the bees of my seven stocks have been out every day, just as if it was summer. Some are gathering pollen, and others bring in what I should think is honey. 1. Do they get much honey from the ivy—they are very busy on it? I have had to open the entrances to give them room, and there is no fighting. I have not opened the hive since it was closed up for the winter. 2. Should I do so to look at them? Is it not a good sign they are breeding? I have two stocks that have not swarmed since 1891, if they even did then, as I have no account before that. When I took some frames from the body of the hive, I found queen-cells in them. 3. Is it likely the bees re-queen themselves without swarming? We are having glorious weather here, just like summer for several hours in midday. Bees are looking strong and healthy.—C. MARKS, *Kingsbridge, Devon, October* 8.

REPLY.—1. Bees gather a good deal from ivy in late autumn if weather is at all favourable. 2. No good purpose can be served by opening the hive, and harm might follow. The bees are evidently doing well, and should be undisturbed by any interference at this season. 3. Yes, frequently.

[1184.] *Transferring for Beginners.*—I am just starting bee-keeping, and have procured two stocks in skeps; one a June and the other a July swarm. The one lot is of a notoriously savage disposition, so a lively time awaits me. Why did I get them? They were cheap, and grand workers, so I determined to take the risk. I am writing to you for a little guidance on points I cannot find in "The British Bee-keepers' Guide Book." I will state my case as clearly as I can, and shall be greatly obliged for an answer in the JOURNAL. The one stock I had from a distance of 3½ miles, so brought it home as it was, stand and all, first stopping up the opening with a piece of clay, and spreading a cloth over top of hive, and tacking it firmly to the stand. Poor bees! what a wonder they lived through such an ordeal; but, fortunately, they seem all right. On the morrow I lifted skep and bees on to a shallow body containing ten frames, 14 in. by 5½ in., having cut a hole 4 in. square in the quilt to permit the bees to get to the entrance. They are now working away, carrying pollen, so I conclude all is well with them. My second stock being but three-quarters of a mile away, I took a hive, containing sixteen standard frames, and put the skep on as above. I assume the proper thing to do will be to "drive" the bees from both skeps sometime in the spring and transfer the combs and bees to the frame hives. If this is right, 1. When should it be done? 2. Will there not be brood in the comb liable to be killed during transference? or should the work be done in a warm room? If so, what temperature will be right? 3. Should the frames containing the transferred comb be put in a standard body under the existing body or on the top? I shall be glad of any instructions you may feel disposed to give bearing on my case. I am reading all bee literature I can lay hands on, so hope to be well up in theory before the practical work of 1895 commences. I have made my own hives (four in number) on the "W. B. C." pattern. Each has standard body, shallow body, eke and section crate. Two are 17 in. square inside, one 19 in. by 17 in., and one 25 in. by 19 in., but the inner walls are the regulation width apart—namely, 14½ in., and everything else to standard. Frames are of tough, white poplar, a ¼ in. tin strip binding the top bar to the sides. Metal runners are inserted for the frames to rest on, and the alighting-board is large in each case—about 18 in. by 7 in. With every kind wish.—JAMES G. GODWIN, *Mayfield Cot'age, Withington, October* 11.

REPLY.—1. There is no positive need for transferring the contents of the skeps to frame hives at all. If the frames of the hives placed below them are fitted with full sheets of foundation the bees may be allowed to transfer themselves in spring, and, seeing that you are

entirely inexperienced, this will be by far the wisest course to pursue. We should, however, substitute standard frames for the shallow ones below the first-named stock. 2. Yes, and sealed brood is very liable to damage in the hands of a beginner. 3. If transferring was done at all, the combs would have to be fitted into the frames of the "existing body" —not under or over it. But it is so much safer for a beginner to avoid breaking in upon the prosperity of a stock in spring by upsetting the brood-nest and cutting up the old combs for tying into frames, that we hope all idea of such a course will be given up. We are pleased to hear of your determination to use home-made hives, it shows energy in the right direction, though it is generally considered wiser to buy the frames ready-cut by machinery, so as to secure exactness in dimensions.

[1185.] *Appearance of Asphyxiated Brood.*—Will you kindly state what is the appearance of the larvæ when naphthaline is used so strong that it asphyxiates it?—NED SWAIN, *Canterbury, October* 8.

REPLY.—When naphthaline of an improper kind is used, or when the right kind is given in considerably larger doses than directed, the brood may be killed as stated. In which case the cappings of the sealed cells are perforated and partly removed by the bees, so as to show the white heads of the dead larvæ within.

[1186.] On my hives being returned from the heather, I found no bees in one, but ten complete frames of comb, some containing dead brood here and there, but no honey, and much pollen. There is no trace of foul-brood. 1. Will you kindly teil me if I may keep the frames of comb in a box in a dry room, without a fire, all through the winter, or if the pollen will go bad? I want to give all the combs as they are to a swarm next spring. 2. Must I melt up the combs that have dead brood in them, or could I remove each dead bee with a large pin? Robber bees have evidently removed whatever honey there was in the hive, and I can find no dead queen.—ANNONÉ, *Derbyshire, October* 15.

REPLY.—1. We fear the pollen will be hard —probably mildewed—and unfit for the bees' use if kept as proposed till spring. 2. If the dead bees in the cells have reached the nymph stage—*i.e*, having fully-formed bodies—they may be removed and the combs as proposed.

Bee Shows to Come.

October 26.—Ayrshire Agricultural Association's annual show at Kilmarnock. Great honey competition. Numerous classes, with liberal premiums. For schedules, apply Jas. McMurthrie, secretary, Ayr, N.B. Entries closed.

Notices to Correspondents and Inquirers

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

TAFFY (Merthyr Tydvil) and NOVICE (Bristol).—Comb is foul broody. We should at once remove all combs from the hive having sealed cells of dead brood, and use naphthaline as a preventive of infection.

SAM HEAD (South Devon).—There is foul brood in comb sent, but the fact of a swarm issuing, and nearly all the brood having hatched out since spring, shows that the disease has been held in check by the remedies used. There being a rather recently-built queen-cell on comb sent, an inspection of combs is desirable to ascertain whether the queen is safe or not.

W. W. C. (Chelston).—You are quite right as to combs being diseased, and did well to destroy them, and fumigate the hive. As a further precaution, we would either cover the interior with paraffin and set it alight to scorch the whole surface, or give a couple of coats of paint before again using.

G. JOHNSON (Garth-road). — Comb sent is choked up with old pollen, but not diseased. It is no wonder the bees died if the bulk of the combs were as sample. They are no better than solid slabs of wood, so far as being usable by the bees.

TROOPER (High Barnet).—1. Not having had any experience of wintering bees on the plan detailed, we cannot give a reliable opinion as to its efficacy or otherwise, but see no reason why it should not answer. 2. Our own custom is to place a 3-in. eke below frames in winter.

GEORGE FISHER (Newport, Devon).—It is so common and frequent an occurrence for dead bees to be found outside hives at this season, that no notice need be taken of it, as it is in no sense an indication of disease. Bee sent is the common or native variety. The "Guide Book" will give you all the information required.

JOHN BROWN (Polyphant).—Comb is affected with foul-brood, though the dead larvæ in nearly all the cells had dried up. It does not appear to be a bad case, and if naphthaline is used to check the disease from spreading in spring, it seems a hopeful one for curing if medicated food is continued whenever feeding is necessary.

H. DUDLEY ARNOTT.—As with other disinfectants, camphor is used on the floor-board of the hive, directly below the combs, not outside the dummy; but the latter is usually put into small muslin bags.

*** *Oxford B.K.A. Show at Woodstock.*—In our report of the above show on the 4th inst. the winner of 3rd prize for sections, and 2nd prize for extracted honey, should have been C. B., not "W. J." Anstey—the latter gentleman not being an exhibitor on the occasion referred to.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

CONVERSAZIONE.

(*Continued from p.* 413).

Mr. Meadows also exhibited a specimen of the improved Bingham smoker with a new nozzle and the bellows inverted. The usual difficulty with smokers was to keep the fuel alight, and this was obviated by the present invention, which was made so as to enable the implement to be kept always in one position —upright—whether in the hand or standing on its own base. There was a guard round it, and wire to prevent the operator's fingers being burnt.

The Chairman (Mr. Cowan) did not like hand-guards, because it increased the weight of the appliance, which was supposed to be made for grown-up people to use, and not children; besides, a bee-keeper would not be likely to burn himself with the smoker more than once; but, of course, manufacturers were obliged to study the requirements of the market.

Mr. Howard said that for a good all-round smoker nothing beat the original Bingham. With regard to the super-clearer, he had practised the plan mentioned by Mr. Woodley in the B. B. J. of September 27 (p. 383). Nevertheless, he did not wish to detract from the merit of Mr. Meadows' invention.

Mr. Carr, speaking of the smoker, said he preferred to have the bellows attached in the old-fashioned way. With regard to the improved super-clearer, he thought the improvement very useful indeed. He sometimes had trouble in getting the bees out of surplus-chambers, in which wet combs were put for cleaning, and had known them to clear up the combs and store the honey so got in one corner and refuse to leave the box. By this invention such difficulty was removed.

The discussion was continued by Mr. Hooker, who spoke in favour of the application of Mr. Meadows' super-clearer, which, he said, involved less exposure of combs than the plan mentioned by Mr. Howard, besides less labour.

Mr. Garratt said on one occasion he had a super-clearer of the ordinary kind in use, but the bees remained up in the supers, and there was more honey in those which had been extracted than there was in the hive below, and they would not go down. As regards exposure it appeared to him that there was the same liability thereto in both plans mentioned, and that was very trifling.

The Chairman corroborated previous speakers as to the difficulty which occasionally occurred in getting bees to leave the supers. He had had such an experience this season, and finally had to compel them to move by taking out several of the frames and shaking the bees off in front of the hive. This year after extracting the contents of six supers, he replaced the wet combs on the frames direct for cleaning up, but on lifting them off again he found the boxes almost as full of bees as before, and had to put the "bee-escape" on a second time to clear them.

A gentleman remarked that he had tried the Porter escape, and never found any trouble in getting the bees out of the supers.

Mr. C. Atkinson was of opinion that the difficulty was more or less dependent on the state of the brood-nest. If the queen was laying the bees would go down to the brood-nest, while if not, they would have a tendency to go up.

After some questions by Mr. Wells relative to the manipulation and adjustment of the super-clearer, which were answered satisfactorily by Mr. Meadows.

Mr. Brice exhibited in a large frame a collection of specimens illustrative of the method of queen-raising by means of queen-cells built on waxen "cups" made by himself and completed by the bees. Mr. Brice explained that he had been carrying out a long series of experiments in queen-rearing, and as he thought the practical, or perhaps he ought to say the visible, result of his investigations would be of interest to those present, they were before them for comment and criticism. But for full particulars he must refer them to his letters now appearing in the pages of the *Bee Journal*.

The frame was passed round among the audience, and examined with much interest amid a general conversation on the subject exemplified.

On the motion of Mr. Carr, a cordial vote of thanks was accorded Mr. Brice for the time and trouble he had taken in furtherance of the science of bee culture, and for kindly giving the meeting an opportunity of inspecting the result of his labours.

Mr. Brice returned thanks, and said that he had taken the subject up partly for amusement at first, but eventually because he thought that something could be done to improve the quality of queens.

The Chairman thought Mr. Brice quite entitled to take credit for the particular improvement he had demonstrated. The method of moving the dwelling-place with the bee larvæ was undoubtedly a great advance, for to transfer the larvæ from the cell was a very delicate operation. It was much less trouble to destroy three or four surrounding cells, cut down the wax, and push that cell into a cup than remove the larvæ. He was pleased to see such beautiful artificial queen-cells as were exhibited; they were very fine, and as good as any the best queen raisers could produce.

Mr. Howard showed his wide shallow frame beautifully filled out with comb. He said that the Hoffman frame had led him to adopt its principles for use in connection with the frame he exhibited, more from a feeling that such a thing was required than from a desire to

introduce something new to the bee world. He thought that eight frames occupying the same space as ten ordinary ones would give the most suitable width, and would meet a bee-keeper's requirements better than the ordinary shallow frame with the standard top bar. He had adopted this frame, and been amply rewarded by his own bees, and in every case where he had entered at shows he had taken first prize. He admitted that the wide frame could not be so easily uncapped as the standard frame, but as against that there was no danger of damaging the comb in the uncapping process. It had been reported to him that when full sheets of foundation had been used in every frame and the honey was not coming in freely, the bees were apt to build from one sheet of foundation to the other cross-wise, and although he had not personally had that experience, he recommended the use of one sheet of foundation and one of starters in rotation to avoid the evil of the intermediate work.

Mr. Garratt thought that with such admirable specimens as Mr. Howard had shown little fault could be found. He had had considerable experience in the use of wide frames, and had heard for the first time of the tendency of bees to build across them, but had never met with a case in his own apiary.

Mr. Carr said that Mr. Howard's able explanation had not removed his objection to the wide frames, which he disliked because of the difficulty of uncapping them He thought it a great advantage to be able to uncap with one stroke of the knife, which would be impossible with the frame before them, as the knife would slide on to the wood, although, of course, everyone would admire the comb. He (Mr. Carr) then exhibited an old frame with narrow sides and wide ends attached, which had beautifully built out comb in it, and for which he claimed all the advantages of Mr. Howard's frame, without the drawback as regards uncapping. He (Mr. Carr) had not had the opportunity of personally trying these frames, although he had a box fitted up with them. That was perhaps because there had been little or no honey to get this year.

Mr. Howard admitted, to some extent, the force of Mr. Carr's criticism. He had always felt that the present system of uncapping might be improved, and he intended next year to experiment with a little machine for that purpose. The instrument had several little lancets, placed one-eighth of an inch apart, so arranged as to perforate the cell caps.

The Chairman thought he might be able to show an uncapping apparatus of the kind described by Mr. Howard, which had been used some twenty years ago. It was packed up with other things presented by him to the B.B.K.A. about nine or ten years since. The instrument was introduced in Germany. It was made something like a curry-comb, and punctured the cells, but was given up because it damaged the combs and caused pieces of comb to become mixed with the honey during extraction.

Mr. Howard said that with the apparatus he proposed there would be no jagging or tearing, provided the uncapping were done in a proper temperature.

Mr. Garratt believed a perforating instrument would be very detrimental to the comb, and would accumulate the wax on itself, and soon become clogged. He thought the best frame would be a compromise between the two styles of frames, the narrow and the wide. If Mr. Howard could see his way to reduce the frame apart from the top bar, still giving that the same width, he (Mr. Garratt) considered that would be the nearest approach to perfection.

The discussion was further continued by Messrs. Hooker, Carr, and Howard; after which the chairman (Mr. Cowan) was very much pressed to give the meeting some account of his recent experiments in the detection of adulterated honey by means of the polariscope.

Mr. Cowan regretted the lateness of the hour, which would prevent him from explaining in detail the mode and results of his investigations; but he would give a rough idea of what could be done with the instrument, and perhaps bring the subject before the next *conversazione* if the members wished it. Up to quite recent times there had been a difficulty in deciding as to the purity or impurity of honey, which was often largely adulterated with glucose, and it was always thought that the polariscope infallibly settled the question by deflecting the ray of light to the left in the case of genuine honey, and to the right when the spurious article was under examination. The acceptance of this principle caused many samples of honey to be condemned which were not impure at all, and later experiments showed that honey produced from conifers polarised the ray of light to the right equally with glucose. Thus it came to be questioned whether it was possible to tell with certainty if honey was pure or not.

Dr. Haenle, however, took the matter up, and discovered that pure honey, although it might deflect the ray of light to the right, after being subjected to dialysis for a certain length of time would return to zero, whereas if adulterated it would still show some degrees of deviation to the right. On the other hand, light-coloured flower honey always turned to the left; so that, in conjunction with dialysiss the polariscope could tell to a nicety the percentage of adulteration. He (the chairman) was very much struck with this method, read the matter up, and sought an interview with Dr. Haenle in Strasburg, who kindly invited him to visit his laboratory, and there study the method. As a result, when he was staying in Alsace, in the Vosges Mountains, with his friend M. Bertrand, they obtained a sample of conifer honey from M. Kunz

of Hohwald, and took it to Dr. Haenle, and had it analysed in their presence (a sample of this honey was handed round for inspection). The process was not very complicated. One part of honey is taken to two parts of water, then all the colouring matter is removed by filtration through animal charcoal until the liquid becomes colourlesss, like water. The liquid is then poured into the tube of polariscope, which is placed in position between the prisms. The instrument is first adjusted, so that when pure water is in the tube the indicator points to zero. If pure flower honey be placed there the ray is invariably turned to the left, and if it turns the other way impurity is to be suspected. In this case the degrees are to be noted, and the sample then placed on the dialyser as shown, water being allowed to flow freely, so that the parchment is depressed. (Mr. Cowan showed a dialyser such as is used for the purpose.) After a certain number of hours the liquid is again examined in polariscope, and if the ray still turns to the right and remains stationary at a certain figure, the honey is adulterated.

Several samples were experimented with in Dr. Haenle's laboratory, the first being the conifer honey, obtained of M. Kunz, of Hohwald. Thirty grammes of honey were mixed with 60 cubic centimètres of water, clarified with animal charcoal, and filtered. A portion was put in a test tube, and alcohol drop by drop was poured in to test the presence of the dextrine, which was shown by a white cloud appearing. The remainder was put in polariscope, and showed a deviation of 36 deg. to the right. It was then put on dialyser at 6 p.m., and on the next day at 11 a.m. Mr. Cowan found that, after seventeen hours' dialysis the indicator pointed to zero, showing that this was pure honey. The second experiment was made with light-coloured flower honey, from the apiary of M. Siegel, Schöeffersheim. Exactly the same process was gone through as with the other, but when this was put in the polariscope, the deviation was 31·5 deg. to the left, which was sufficient to show its purity. The alcohol test showed no dextrine at all. So far so good, but they wanted to see if samples they themselves adulterated could with certainty be detected. They therefore took 40 grammes of M. Siegel's honey, to which was added 10 grammes of glucose. The 50 grammes of mixture was added to 100 grammes of water, mixed, clarified, and filtered. This was a 20 per cent. adulteration. With alcohol a strong white precipitate indicated the presence of dextrine. In the polariscope there was a rotation of 44 deg. to the right. To arrive at the percentage Dr. Haenle had worked out, as a result of a large number of experiments, a formula, which was now used. The formula is $x=\frac{(P+p)\times 3}{10}$ for flower honey; $x=$ per centage of adulteration; P=polarisation of honey that is being examined; p=normal polarisation of pure honey. The average normal polarisation of pure honey being 30 deg., acccording to this formula we have $\frac{(44+30)\times 3}{10}=22{\cdot}2$ per cent. It will be seen this is very nearly the actual adulteration of 20 per cent., but the difference is due to the fact of the experiment being conducted hastily, and no account having been taken of temperature and evaporation. Still even this is near enough for our purpose. This mixture was then put on dialyzer at 6 p.m., and at 11 a.m. next day on being again polarised it still showed a deviation of 22 deg. to the right. Just in the same way the conifer honey was adulterated with 30 per cent. of glucose. I then turned 137 deg. to the right. The formula for conifer honey is $x=\frac{(P-p)\times 3}{10.}$ Therefore, according to this, the adulterated honey works out as follows:—$\frac{(137-30)\times 3}{10}=$ 32·1 per cent., with a slight difference as before, due to the same causes.

Mr. Cowan said he had followed up the subject and carried out a good many experiments which had been of great interest to him, as they corroborated Dr. Haenle's discovery. He had got one specimen of adulterated honey that he had purchased in the tube of polariscope on the table for the members to see for themselves. With alcohol it showed dextrine, and polarised 7 deg. to the right. According to the formula, this represented an adulteration of 11·1 per cent. As it was so late, he would bring the matter more fully before the members at a future meeting.

In reply to Mr. Howard, the Chairman said it was possible to clarify dark honey, but in clarifying for the polariscope so much charcoal was used that the process generally caused the honey to lose its flavour, although not always.

The polariscope was then examined with much interest by every member of the audience present, Mr. Cowan manipulating the instrument and explaining the process and method of ascertaining the results described.

A vote of thanks to the chairman for his very interesting address, proposed by Mr. Garratt, brought the proceedings to a close.

HONEY AT THE DAIRY SHOW.

An analysis of the Dairy Show Catalogue of honey entries seems to prove that the bee-keepers of the North and Midlands are a little more enterprising than those in some of our southern counties. On the occasion of a great metropolitan show it is desirable to have honey from every county in order to make a thoroughly representative competition. Berks headed the list with ten entries; Yorkshire and Staffordshire ran her close with nine each; Oxon, Hunts, and Wilts had six each; Cheshire, 5; Essex and Northampton each with four; Hereford, Hants, and Somerset,

three each; Cambridge, Dumfrieshire, Herts, and Notts with two; and, finally, seven counties with a single entry — Beds, Bucks, Derby, Glamorgan, Leicestershire, Lincoln, and Middlesex. There were fifteen prizes to eighty-three entries, so that the chances of every exhibitor succeeding were as 1 to 5½. Berks took most prizes—three; Staffordshire and Northamptonshire two each, and Cheshire, Somerset, Derby, Hereford, Wilts, Hunts, Oxfordshire, and Dumfrieshire carried off single prizes. Yorkshire honey was very fine and would have scored but for the packages not complying with the requirements of the schedule.

Ireland sent no honey, nor were there entries from eighteen of our English counties. If these "eighteen" stirred themselves (and we suspect that the weather is accountable for this year's absence), it is easy to see what a grand opportunity the Dairy Show affords for advancing the interests of bee-keepers. In fact, the British B.K.A. have no finer field in the metropolis for bringing British honey and British honey *products* (such as mead, honey-vinegar, and confections) into prominent notice. Their new departure this year was wise, and the experiences acquired during the four days at the B.B.K.A. annexe will be most useful in planning for another season's show. The interest of visitors in the honey and the bees was astonishing, proving what an attraction to the public the honey section of the show presents. The honey labels of various County Associations were exhibited and the scheme explained. Next year we hope most counties will be included.

The conversazione at Jermyn-street on Thursday last was one of the most profitable on record, and must do much towards strengthening the bonds that exist between the B.B.K.A. and the affiliated Associations. It was a real pleasure to see so many bee-keepers there, and some from so far. What we want now is to renew Associations in counties where they have been allowed to lapse, form Associations in counties where they have never existed, and instil fresh blood into the dormant Associations of important honey-producing counties where the industry is lagging behind for lack of vigorous leading.

EXPERIMENTS ON FOUL BROOD.

We have received the following communication from Mr. Till respecting experiments on foul brood:—

Mr. Percy Adams, of the Kent County Ophthalmic Hospital, Maidstone, has lately devoted some considerable attention to diseases affecting bees, and owing to a notice in the Kent B.K.A. monthly journal, several Kent bee-keepers have sent him specimens of comb where doubt has existed as to the presence of foul brood. Mr. Adams says he has placed all under sterilised glass covers; and sterile peptonised gelatine glycerine agar and gelatine agar with grape sugar were inoculated with each suspected sample, by means of a platinum wire, both stab, surface, streak, and plate cultivations were made.

Grape sugar gelatine with peptone is a useful cultivating medium; the bacilli also flourish on other media, including potato. Temperature of inoculator, 35 deg. C. if agar is added or potato is used. The bacillus should be stained with carbo-methyl blue, or carbo-fuschin—these re-agents yield very good results with ordinary cover-glass preparations mounted in Canada balsam—subsequently preserving the mounted slides in a box or drawer, as the dyes fade on prolonged exposure to daylight.

Out of some ten or more samples received this year, in four only were the true bacillus alvei (of Cheyne and Cheshire) isolated. It is probable that many cases of a condition of chilled brood are mistaken for and superadded to subsequently by becoming infected with true foul brood from elsewhere. In addition to merely submitting comb to examination, it is well to know the condition of suspected colonies, together with history of the attack, its neighbouring prevalence, or the contrary, and the approximate distances between infected areas; also all the symptoms, as far as possible, ought to be reported that are observable in suspected stocks; also as to the characteristic odour, depression of cappings, dark colour, and decomposed larvæ, which may be present more or less in both conditions (characteristic odour perhaps excepted). A medical opinion as to disease in the human subject is always assisted by considering all the attendant physical symptoms. The lowered vitality or even death of the larvæ following undue exposure to a lower temperature than 70 deg. Fahr. is sometimes followed by that condition which is commonly known as "chilled brood," and those who are not well acquainted with the special symptoms of foul brood are apt to mistake one for the other. Stocks in which larvæ have been affected by chill or the larvæ have died from exposure to too low a temperature have an increased susceptibility to infection—the stock is debilitated, and therefore more liable to contract foul brood if it exists in the neighbourhood.

Mr. Adams says bee-keepers are in the habit of carrying unprotected frames of brood some distance from one hive to another, and expose the brood-frames during several manipulations. One bee-keeper particularly, who was in the habit of exposing brood-frames thus, complained to him and brought him specimens of supposed foul-broody comb from several of his stocks. In not a single instance could the true bacillus alvei be discovered — it was a wholesale case of chilled brood—and to guard against such results in an apiary Mr. Adams recommended the use of a portable warmed receptacle for brood combs, not difficult to contrive. Another bee-keeper sent him a queen, some workers, and suspected specimens of comb, with an accompanying question, to which

Mr. Adams merely *proposed* an answer (*sub judice*).

This bee-keeper asks, "Does the bacillus infest the mature bees and account for their inactivity? A dozen bees will leave a single healthy colony to every one that will leave an adjacent infected hive, although both may contain a like population."

Mr. Adams says this inactivity is of common occurrence among bees suffering from "dysentery" as well as F. B., and may be accounted for thus :—

(*a*) The debilitating effects of these diseases on the health of the bees themselves.

(*b*) The peculiar trait in the natural history of the bees; as exhibited by a distinct loss of energy, and abandonment, whenever any serious calamity happens, affecting the population and constitution of the hive; for example, that manifested upon the death or loss of a queen, apart from the hygienic and reproductive conditions of the hive and its contents thus seriously interfered with.

Mr. Adams says preventive and precautionary measures are greatly to be commended; but, knowing how inadequate is the knowledge generally possessed as to the life-history of these micro-organisms, he inclines to the belief that "stamping out" is preferable to experiments at cure. He truly remarks that the avarice of individuals, and more frequently ignorance or lack of foresight on the part of apiarists and agriculturists, often cause extensive losses of other people's bees and crops. Reluctance to destroy (*pro bono publico*), as Nature, if left to herself, will assuredly do, is much to be deprecated, for the focus of infection, like an outbreak of fire, can be combatted best at the initial stage.

He adds, woe betide the apiarist who attempts remedial measures who does not fully appreciate the difficulties of the task. Practical and theoretical knowledge is needful to annihilate the enemy, whose methods of attack are as assiduous as they are insidious. The safest and shortest road to ultimate immunity from the pest is destruction by fire of all affected bees and combs, and effectual disinfection of hives, quilts, feeders, and all appliances by boiling or steaming at a temperature of at least 212 deg. And more than once is desirable, and on each occasion for half an hour at least. A proper sterilising chamber is recommended.

Mr. Adams does not in the least deprecate the value of naphthol beta in the syrup, and naphthaline in *uninfected* hives, especially in the neighbourhood of infected centres; but in vain may the bee-keeper draw around his fairy ring of carbolic acid and phenolated syrup, and make his bees dyspeptic with beta naphthol, *unless* he also properly disinfects any infected hive and furniture. Spores that survive a temperature of even 212 deg. Fah. demand a thoroughness in all the details or some will survive. He says: "Therefore sterilise your infected hives, but follow the old motto, *quocunque trahunt fata sequamur*, so far as the unfortunate bees are concerned. Destroy them *in toto*, or Nature may order a greater execution over a far wider area."

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only, and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[2089.] Weather continues mild and fairly dry, and with open, mild weather the work in the apiary which is often left till the "more convenient time" may still be done, though not so well calculated to the future well-being of the bees as the same work done a month earlier in the year.

Where the feeding-up has been done, the winter passages attended to, and the quilts and wraps or chaff cushions properly adjusted, the roofs made waterproof and the covers windproof, then the bees, if strong in numbers headed with young queens and provided with plenty of food, may be allowed to rest in quietness and peace for the winter months.

I always like to clear all weeds from under the hives before packing for winter. This allows free ventilation and draught under the hives or between the legs of stools, and tends to increase the durability of the hives and supports, and if my hives rested on plinths I should give them a coating every other year with gas or coal tar. This stuff can be made to work on as easily as paint by the addition of paraffin to thin it down to the proper consistency, and is a great preservative of wood when in contact with the ground.

Yes, I went to the Dairy Show, Islington, met old friends and new ones there, though, when contrasted with the shows at South Kensington, a decade or more since, the men have changed, though the object is the same. Old familiar faces, as I remember them then, are missing; nay, many of the prominent ones of that time are gone to that bourne from whence no traveller returns; some are still with us, though absent from the show, and in looking down the list of exhibitors I miss the familiar names that used to compete—not only compete for, but also carry off, the prizes.

On the present occasion it was gratifying to find the Berkshire boys well to the fore, taking the three prizes for comb honey, showing that our Royal county is equal to any in her flora, and in the extracted honey, though we failed to win the prize, we got R. and V.H.C., V.H.C., H.C., and C.; thus all Berks exhibits (that were staged) took prizes or honourable mention, except 1,189, my own exhibit in the box and basket classes.

This brings us to the so-called commercial classes for honey, which really developed in the minds of the judges into a "Box and basket class." The contents of the tins, which every exhibitor considered the most suitable commercial package, received but little attention at the hands of the judges, and results would have been the same if the whole of the tins had been empty. Therefore I contend that if the same classes are repeated another year it will be as well to strike out the words "extracted honey," and insert "the most suitable package for the transit of honey," and thus give our manufacturers—be they "box or basket makers"—a class to themselves. The wording of the schedule is certainly ambiguous and open to each exhibitor's different rendering, but I for one—and I know I do not stand alone in my reading of the words—contend that the package containing the honey was, and is, the commercial package referred to in the schedule, and *not the case containing the* commercial package, and if the judges had adjudicated on the packages and their contents the awards would most certainly have had a different placement; that at least is my opinion, and supposing I know anything regarding the quality of honey.

These classes another year, or at another show, whether it be at "The Dairy" or any other honey show, should be so worded that every exhibitor should know for what he is going to compete. This year, if I had known it was for travelling cases or hampers, I should not have entered or taken the trouble and expense of getting a stock of tins, and sending the honey to London in unsaleable quantities. Fortunately I had one tin with a tap, and that fact sold my exhibit; otherwise it would have been returned at end of show to the "World's End," and then bottled and sent up to London again.

Then, from another point of view, who would think of purchasing a new packing-case in which to pack tins of honey. If any customer ordered 1 cwt. of honey I should put it in four 28-lb. tins, and pack the four tins in an empty section-box, first putting a layer of hay or straw, then the tins one in each corner, then push hay between the tins and between the tins and the sides of box and on top, and nail down. Thus you see my box would cost nothing, or in the event of my not having empty (1,000 section) cases I should pack the same quantity in a cube sugar box, cost price 6d., and if I received an order for 5 cwt. I should not pack in larger quantities than 1 cwt. in a box. Railway porters are not always chummy enough with each other to lend a helping hand, and a large crate, such as was landed in the honey section at the Dairy Show, in the gallery, with one lid squeezed off, and contents dripping, was the result of packing in too large quantities, and not using even the precaution of any packing material. This lot was more than one man could move about comfortably. I mention this case as an object-lesson to our exhibitors in the future. If I produced extracted honey on a large scale I should have tins made to hold ½ cwt. each with taps, and pack two in one case—case and tins returnable; but with the small tins, and in smaller quantities, the carriage of empties would be almost as much as the cost of new tins.—W. WOODLEY, *Beedon, Newbury.*

THE "WELLS" SYSTEM.

[2090.] Friend W. Martin (2080) wishes to hear how my hives worked on the "Wells" plan turned out. As I said some time ago, I could not find time to weigh my takings from hives worked on this system, but will give a bit of experience with half-a-dozen double stocks this season.

I have only one that holds ten frames on each side of the perforated dummy, and these stocks were put in this particular hive last year. When the hives were full of bees I put on a shallow super (after putting on the excluder), filling it up with shallow frames of worked-out combs. As the bees increased I put on two supers of standard frames of worked-out combs, each holding about nine frames, on top of the shallow super, that was the full length of the hive. I got this super entirely filled, and the two supers of standard frames each about half full. I lifted off the two top supers, and had to take out shallow frames one by one and shake the bees off, as it was too heavy and cumbersome to lift, and to put an escape under, as I had not another super of the same size and length; so, after taking two or more frames out, I put other combs in that I had previously extracted, and so worked through to the other end of hive, but as our season came to an end there was very little more put in it.

Of course I put the two supers with full-sized standard frames on to the top again, and left them on till I cleared them out at the end of the season. These hives have required feeding up for winter. The five other double stocks did fairly well. I tiered them up with shallow frames of foundation, as these hives were only 2 ft. long, so as to give the queens more room for breeding if they required it—of course, putting in a shallow dummy to keep the queens apart. I then put on excluder, and on the top of that worked-out combs in shallow frame supers. These did fairly well for honey, but not enough for the extra trouble and work they gave compared with single stock hives that were tiered up with ready-built combs for extracting. I only had one swarm from these double hives, and this one swarmed while I was away at the Cambridge show; but as it was late when I got home I had to defer putting this swarm back till early the next morning. Of course I had to take the supers off, as well as the excluders, and take the shallow frames out from the one that had swarmed to cut out

queen cells. I found these shallow brood frames joined at bottom to the top bars of the stock hive below, being built full of drone comb and brood between bottom bar and top bar of bottom frame. The other side that had not swarmed had to be treated in the same way before I could lift off this super. I then had to go over standard frames below to cut out queen-cells, also to cover over the other side so that the queens should not by chance get from one side to the other where bees had swarmed. I examined this lot and saw the queen, and found that they had not made any preparations to swarm, so after putting on the shallow frames again, as well as excluder and supers, I stopped the entrance of the one that had the queen in, and then giving the skep containing the swarm a few puffs of tobacco smoke, I threw them on to a tray and let them run into their old hive again, the one from which they swarmed. I watched the queen go in, and put a carbolic cloth to keep the bees to their own side of the entrance. These did fairly well, but at the end of the season, some time after taking off all supers and shallow frames which were under the excluder, and covering them up, I found all the bees had deserted from that side that did not swarm and joined the other stock, leaving that side empty of honey. Since then I have put in a lot of driven bees, giving them the combs the bees had deserted. But, first of all, they were put into another hive close by the side, and lifted out of that into the double hive, so that there was no chance for them to go into the other side. I have had four lots out of the five that have been minus the bees on one side into which I have put other lots in a similar way to the above. I also had one lot last year that did the same, so no doubt the queens got killed. I do not like the tiering up with brood combs or foundation, as there is too much work about it, but, all being well, I shall give them another season's trial. I prefer the hive that holds ten frames on each side of dummy. Years ago I had three full-size double hives, but as two of them would not hold standard-size frames, I had discarded them when I changed all my hives that were not of standard size to the standard size. Here I may mention that I had made many of these hives before the standard frame was fixed upon. I think, too, that friend Martin was like me in working these double hives years ago, that we did not super them with one super, common to both lots, but separately. I very well remember friend Martin being at our place, years ago, when one of these double-stock hives swarmed; first one lot came out, and then almost immediately that on the other side came out; it appeared as though they both had got the swarming fever at the same time. I cannot speak very enthusiastically about the system, but if all's well I will try it again.

Here I may say that our honey flow was so short that had I not had a lot of worked-out combs with 1½-in. top bars I should not have had as nice a lot of extracted honey as I did get. It is also possible that, if the honey flow had continued longer, these double stocks might have done better than they did, in comparison to the single stocks. I am sorry to hear that Mr. Martin has had such a bad season for honey, but there must have been some about his locality, or else he would not have had so many swarms as he told me he had had, and which I mentioned in my last echo. The great point seems to me (and this took me several years to get into my noddle) that the way to get the most honey in a short season is either to prevent the bees swarming, or if they do happen to swarm, to cut out queen cells and put the swarm back. In 1893 I did not have a single natural swarm, whereas this year I had about thirty from about seventy hives. I see from the *Beekeepers' Review*, there is an extract from James Heddon's quarterly paper saying he had only had, I think, one swarm. He thinks he is breeding the swarming mania out of his bees. Let him, however, wait another year or two, and he will probably find he is mistaken. Another point Mr. Martin mentions is that his friend Nicolls said he would have to feed. Well, I have had to feed, as my stocks that were worked for extracted honey put nearly all of it in the frames of the top body boxes, and these I extracted. When I crowded the bees below, what could be done but feed after taking all their honey away from them.—John Walton, *Honey Cott, Weston, Leamington.*

October 13, 1894.

BEES IN COUNTY KILKENNY.

[2091.] The season of '94 was ushered in with beautiful weather, with reports of swarms as early as April. Bees made such rapid progress during the early part of May that swarms were quite common, when a sudden change in the weather brought all colonies to a standstill, and they remained so till about June 20, when the swarming fever returned with renewed vigour. The skepists have their apiaries increased by more than half. When the season for the sulphur-pit arrived, there was scarcely a hive to be found worth destroying the bees for the stores they had gathered. I know a skepist who has twenty-four stocks, and out of that number he could not get one worth "taking up." I had made arrangements with him early in the season to drive some stocks when the time came, but the hives were so light he gave up the idea, and, instead of the driven bees I was to get, he gave me a couple of stocks to take away undisturbed, as he could not, he said, feed them all.

A lot of late and after-swarms died from starvation as early as August. This will give an idea of the season in this district. Beekeepers who have adopted the frame hive are something better off. I think about 30 lb. would be about the average for hives well managed. I secured about 40 lb. myself, but

I have to feed very liberally, as the bees carried almost all they gathered to the supers. To further illustrate what I say of the season, as well as my own success, I attach one of several extracts taken from our local papers' report of the Iverk Farming Society's Show, held in Bessborough Park on September 25 :— "Constable Kerry, Piltown, had on exhibition a splendid collection of honey gathered in the village, which was, however, late for entry. The tent was crowded during the day by visitors, who complimented Mr. Kerry in the warmest terms upon his success."

We have no bee-keepers' association here, and my object in having the exhibit at the show was to bring the bee-keeping industry prominently before the public.

My next letter will be about stray swarms, and a swarm building combs in the open air and living there for two months.—M. K., *Piltown, co. Kilkenny.*

"ROBBING."

[2092.] We all know the risk of leaving honey exposed, especially in weather when bees are flying, but this is not the worst risk that bee-keepers have to contend with. I have just had an unfortunate experience which shows that we cannot too securely protect our honey, especially honey going to and from exhibitions. The very fact that the contents are described on the outside, in order to insure extra careful handling, acts as an additional temptation to dishonest hands employed by the carriers. I and two others agreed to share a big exhibit of Yorkshire honey in bulk at the "Dairy." For simplicity it was all ordered to one destination twenty miles out. On opening the cases, it was found that one tin of 28 lb. weight had been entirely emptied of its contents, but the lid of the tin had been carefully replaced, so that it had all the appearance of a full package! The operation had evidently been carried out under stress of time, much honey had been spilled in the crate, and the other tins evidently repacked without the least particle of care. It shows the great necessity for some fastening not easily tampered with, and the advantage of padlocks such as those attached to the exhibits to which a prize was awarded at the recent show. My own unfortunate experience should act as a warning. It is very vexatious, not to speak of the money loss and the trouble of endeavouring to fix the blame on the carriers or railway companies, who are "very adepts" in the art of shirking or shifting responsibility.—E. D. T.

DAIRY SHOW.

[2093.] In response to an appeal in the JOURNAL a few weeks ago I decided to become an exhibitor of honey at the recent Dairy Show. I sent to the secretary for a schedule, and was greatly surprised to find that all the honey to be shown must have been gathered during 1894. I made an entry in four classes, and informed the secretary that if it were insisted on that the granulated honey must be of the current year I should be glad if he would cancel my entry in that class. He at once replied that there could not be a doubt as to the meaning of the rules, and returned me my entry-fee. Fancy, then, my surprise when at the Dairy Show I found the judges, while busy with this class, acknowledging that they looked on the honey as having been gathered prior to this year, and awarded prizes regardless of the rule. Of course I am not opposed to old honey being shown, in fact I very much favour it, but I do contend that at a great show, held so near to headquarters, one ought to expect better treatment than this.

I also made an entry in the one hundredweight and the quarter hundredweight classes, and in order that there should be no mistake as to the judge's expectations *re* "Commercial Packages," I consulted an eminent authority. He courteously replied that "so long as a decent commercial package is used suitable for the wholesale trade, I do not know that more importance than this need be attached to it. For myself, I certainly look to contents as of infinitely more importance than package, but the honey must be in decent presentable form on show-bench." After receiving this I at once set to work and got my honey ready in 28, 14, and 7 lb. lever tins, which in due course were packed in box and sent to the show. At the show after the judges had made their awards, I was informed that although my honey was the best, the judges had given the prizes to other exhibits, because of the packages. They looked on my lever tins as not being "commercial packages." Now to meet the requirements of the judges, let us see what I must do. In the heavy class I exhibited three 28 lb., one 14 lb., and four 7 lb. tins (the wholesale trade, I find, does not confine itself to 2 stone tins), that is, in all I had eight tins. These I got from the London makers, and in order to suit the judges I must send these to a basket-maker (for no appliance dealer deals in these things), to have each fitted round with wicker-work, with wicker-work lids and handles. After that I must get eight little locks, with eight little keys. When I have got my packages home and duly filled, I must write eight labels and forward three miles to nearest railway station. From leaving my house, these eight separate packages will have to be handled by railway or other servants quite eight different times ere they reach the show bench in the Agricultural Hall. Now, come, gentlemen, are these the requirements of commercial men of to-day, or are they those of a lot of —— well, don't let us be unkind, say the uncommercial? If you can't determine, please go to your grocer and ask him how he receives and distributes similar goods—take, if you like, golden syrup. My grocer tells me he receives it in lever tins packed 1 cwt. in a box. Surely we cannot be far wrong if we take these commercial men,

who are handling tons of such commodities as our guide.

We will, however, if you like, simply for argument's sake, allow that some such package as that favoured at the Dairy Show is desirable. Wouldn't it be fairer to invite appliance-makers to compete in such a class rather than to have people like myself, who are bee-keepers pure and simple, spending a good deal of valuable time, trouble, and money over exhibits that, be their productions never so good, must end in failure, and give rise to a feeling of disgust?—CHAS. ATKINSON, *Tockwith, York, October* 17, 1894.

[It was, no doubt, a printer's error to state granulated honey was to be of this year, and the secretary interpreted schedule as printed. There may be differences of opinion as to what commercial packages should be like, but there could be no difference of opinion that they should be such as to ensure the safe transit of the honey from the bee-keeper to the purchaser. The way golden syrup is packed certainly insures its safe transit, but from the fact that our correspondent's honey was tampered with, and that a whole 28 lb. tin arrived empty at the purchaser's, shows that something more than a simple lever lid tin is required for its protection, as will be seen by reference to letter headed "Robbery" in this issue, and that the judges were fully justified in their awards. The class was open to all, and not restricted to bee-keepers only, therefore our correspondent was not obliged to exhibit in this class unless he chose.—EDS. *B.B.J.*]

Queries and Replies.

[1187.] *Drone-breeding Queen.*—I am sending you by this mail a piece of comb from my hive, and should be obliged for your opinion of its contents. Up till July I had two stocks—*i.e.*, a parent stock and swarm—both in frame hives. About first week in August I suspected queenlessness in both hives, and at end of August united the stocks, as then I was sure they were queenless, being *broodless*, so I united the two lots, and purchased a queen from a well-known dealer, which arrived on August 28, and was duly introduced. At end of nine days there was no brood. I then began to stimulate by feeding, and at end of another nine days found brood and eggs in worker cells, as per comb enclosed in box. But these have all hatched out drones, no workers having been hatched in the hive since queen was introduced; and the bees continue to throw out young drones in all stages of growth, and occasionally drone grubs. Three frames in centre of brood-nest have been used in this way; remainder of frames (seven) are entirely clear, free from brood in every degree, and contain nothing but honey and pollen. Queen sent seemed small, and not very lively. Do you think she is a drone breeder? It would seem like it. After introduction of queen about half a dozen dead bees were found lying on ground in front of hive, but the queen most certainly was not among them, as I looked most carefully. — (REV.) J. W. CHALMERS, *Kirkwall, Orkney, October* 2.

REPLY.—The sample of comb sent clearly proves that the queen now in the hive has not been fertilised, and consequently is a drone-breeder. Whether or not she is the actual queen sold to you by the dealer referred to, of course we cannot positively say, seeing there is a possibility that the two stocks were not queenless when united just before the introduction of alien queen. We think the right course would be to explain the case to the dealer who sent the queen, and hear what he has to say. He may be prepared to vouch for the fertility of the queen sent, and, if so, what can be said in contravention by a third person possessing no means of personally verifying the facts?

[1188.] *Avoiding Exciting Bees when Uniting.*—During the year I have united a good many stocks by simply smoking and alternating combs, so far without any fighting, the results being always satisfactory. On the 27th ult. I attempted to do the same thing, putting two combs each of bees into two hives; they were apparently accepted, and I thought all going on well, but the following morning, to my surprise, I found the ground literally covered with dead bees, the strangers evidently having been killed. I may add, I put shallow frames in at the same time to be cleared up. 1. Can you tell me why this happened, as the same occurred in both hives? 2. Is it usual so late in the season to use extra precautions? If so, what are they. Thanking you in anticipation.—E. B., *Swansea, October* 2.

REPLY.—1. We think there can be no doubt that the giving of frames for clearing up when uniting caused the mischief. 2. So far from its being necessary to use extra precaution at this season, autumn is generally found to be a good season for uniting, if done at a time when robbing is not rife. It is certain that nothing so much excites bees as giving them wet combs to clean up; and, when uniting, everything tending to cause excitement should be carefully avoided.

[1189.] *Carbolised Cloth.*—I have seen carbolised cloth mentioned in your columns as an alternative to smokers, and should be much obliged if you will kindly let me know your opinion of it, also method of use and approximate cost. It is not kept by the firm with whom I deal for bee appliances, nor is it mentioned in any of the lists that have been sent me. Can you tell me where to procure it, supposing that you advocate its use? My objection to smokers is that they require a second pair of hands to keep them alight, which is not always convenient.—C. M., *Co. Meath.*

REPLY.—Make the following solution:—1½ oz. Calvert's No. 5 carbolic acid, 1½ oz. of

glycerine, 1 quart of warm water. The acid and glycerine should be well mixed before adding the water, and the bottle should be well shaken before using. A piece of cheese cloth, 18 in. square, is soaked in this solution, and, after wringing it, spread it over the hive. It answers the purpose very well, but, carbolic acid being poisonous, great care should be taken not to have the solution too strong. A good smoker properly charged and kept upright when not in use will keep alight as long as the fuel lasts.

[1190.] *Appearance of Asphyxiated Brood.*—I beg to thank you for your reply to my query (No. 1185) *re* asphyxiation of larvæ. What I really wanted to know was the appearance of the brood in the earlier—the grub—stage, rather than the sealed nymph, as I cannot help thinking that what I should call the more delicate just-hatched grub would be visibly affected, and I should then be able to save my "whole combs of brood" from perishing. My excuse for troubling you again is the importance of this question to all who are using, or are about to use, naphthaline.—NED SWAIN, *Canterbury, October* 20.

REPLY.—The young grubs generally turn grey, and become flabby, frequently lying stretched on the side of the cell instead of being curled up on the base. At a later stage, if not removed at once by the bees, they also become grey and watery.

[1191.] *Two Queens in One Hive.*—On Sunday, the 14th inst., I saw a large bee flying at entrance of one of my hives. I thought it was a late drone, but, on alighting, I saw it was a queen. Upon entering, about a dozen workers followed her, showing no hostility. I examined the same to-day, six days later, and I saw the old queen, and on the next frame found another, apparently a young one, but larger than the old one. I have now put a division in centre of frames. 1. Do you think the young queen is fertilised? 2. If not, would she be any good next year, as I could make another stock if both queens prove active?—W. H. SMITH, *Kingswood, Bristol.*

REPLY.—1. It is impossible to say if the young queen is fertilised from data given, but we should think it most probable that she is not. 2. Certainly, if not fertilised, she would be no use next year, for usually, if fecundation is delayed beyond twenty-one days, the queen would only produce drones.

[1192.] *Dead Brood in Hives.*—In looking over my bees the other day I find what I believe to be a good deal of dead brood. A friend of mine states that it is "chilled brood." Will you, therefore, kindly say in BRITISH BEE JOURNAL what I ought to do with it? Or will the bees clean it out and make it all right for themselves.—CHARLES C. JOHNSTON, *Forres, N.B.*

REPLY.—Without a sample of the dead brood to guide us, we cannot advise what is best to be done. It may be foul brood, but in any case we should not leave combs in the hive all winter, with rotting brood in the cells, whether the brood be "foul" or "chilled."

ADULTERATED BEESWAX.

At the Borough Police-court, Warwick, William Ware Walker, of the General Supply Stores, Market-place, was summoned for selling beeswax which was adulterated with 60 per cent. of foreign matter. The town clerk (Mr. Brabazon Campbell) prosecuted, and Mr. Slade, of Wallingford, defended. The certificate of the borough analyist (Mr. Bostock Hill) was not disputed, but it was contended that, as the defendant had bought the substance from the Grocers' Association as beeswax, and it was invoiced as such, this amounted to a warranty. The price paid for it was 1s. 3d. per lb., and it was sold at 1s. 9d. per lb. As soon as this prosecution was instituted the Grocers' Association were communicated with, and they then admitted that it was not genuine beeswax, but cerasin. They then altered their price-lists, and called it "yellow wax"; but as the defendant had sold the article bonâ-fide as he received it, with an implied warranty, he thought it would be unjust that he should be convicted. The magistrates held that there was no warranty in law, but thought that the defendant had acted honestly throughout, though he had committed an offence under the act, for which only a nominal penalty of 5s. would be inflicted.—*Birmingham Daily Post.*

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

T. TTOCS (Shropshire).—If properly made, and instructions fully carried out, medicated syrup will keep any length of time without crystallising. 2. 27½ grains 1 drachm. 3. Pure cane sugar No. 7, small crystals.

D. H. H. CHURCH.—The comb sent is affected with foul brood. As the stock from which this comb was sent is destroyed, can you not persuade the skeppist to have his remaining stocks examined, as it is most probable that they would also be similarly affected.

R. BAYLEY (Lockites).—As you say there is nothing the matter with your bees, and they work very well, we can only assume that the alighting board slopes too much, or is too short.

S. GREENING.—You should have completed your feeding last month. As you say they have honey in their combs, you must supplement this with cakes of candy placed on top of frames, unless you can make sure that they have enough honey. They will require about 2 square feet superficial.

Editorial, Notices, &c.

USEFUL HINTS.

THIS is the dull season in the bee-world, though we have but now been drawing attention in our monthly, the *Record*, to the exceptional amount of public interest which has been aroused during the year on the subject of bee-keeping, and since the article referred to was written, quite a remarkable confirmation of the fact has appeared in so far as we bee-men have had the distinction of a happily conceived little lyric, spontaneously composed for us by no less keen an observer of the flow of public opinion than the author of "Pinafore."

Mr. W. S. Gilbert in his latest humorous opera — destined no doubt to become world-famous—thus writes of:—

THE WILFUL BEE.

A hive of bees, as I've heard say,
Said to their Queen one sultry day,
"Please, your Majesty's high position,
The hive is full and the weather is warm,
We rather think, with due submission,
The time has come when we ought to swarm?"
Buzz, buzz, buzz, buzz.

Upspake their Queen, and thus spake she—
"This is a matter that rests with me,
Who dares opinions thus to form?
I'll tell you when it is time to swarm!"
Buzz, buzz.

Her Majesty wore an angry frown,
In fact her Majesty's foot was down—
Her Majesty sulked—declined to sup—
In short her Majesty's back was up.
Buzz, buzz,
Her foot was down and her back was up.

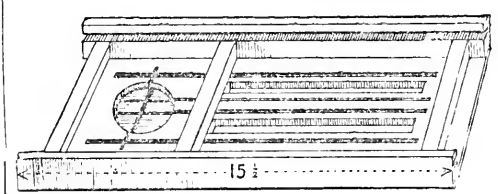
That hive contained one obstinate bee
(His name was Peter), and thus spake he—
"Though every bee has shown white feather,
To bow to fashion I am not prone—
Why should a hive swarm all together?
Surely a bee can swarm alone?"
Buzz, buzz.

Upside down and inside out,
Backwards, forwards, round about,
Twirling here, and twisting there,
Topsy-turvily everywhere—
Buzz, buzz.

Pitiful sight it was to see
Respectable, elderly, high-class bee,
Who kicked the beam at sixteen stone,
Trying his best to swarm alone!
Buzz, buzz.
Trying his best to swarm alone!

It is not too much to say that the above quaintly conceived and admirably expressed verses will make the "wilful bee" known to millions of people in all parts of the world. We must therefore thank the distinguished author for giving us a fine "free ad." in addition to the pleasure the reading affords us.

WEATHER.—A wearying round of cold wet days, which, as we write, show no signs of coming to an end, rendering everything outside wretched in the extreme, has no doubt contributed largely to the neglect of much-needed work in the apiary; also to the bees, who are of course the main sufferers through the weather, and consequent dilatoriness of their owners. Where feeding has been neglected, it may be useful to have here described a feeder, designed for late feeding by Mr. W. Hogg, who thus explains its use:—"I send you sketch of a feeder that may be of use to some who neglect to feed up their bees before cold weather sets in. Bees will not leave the cluster far in cold weather for food, therefore many hives perish when food is placed too far from the cluster. The sketch, I think, will show how it is made.



The glass that slides over the two openings is not shown. The food is put in a wide-mouthed bottle and a piece of cloth held over it till the bottle is turned up on the sunk ring at the end of feeder, when the cloth is withdrawn, and the syrup runs along the four grooves on each side of the openings; the bees have scarcely any distance to come up and take the food down. It can also be placed to give winter passages, or when it is put to run the same way as the frames the openings are placed right above two seams of bees." When the time is past for giving liquid food, a cake of candy may be set in the feeder and the quilts laid on above the glass, so that the condition of the candy may be seen at any time without disturbing the bees.

Next in importance to feeding comes making sure that each stock has a queen at its head. Where the usual autumn inspection has not yet been made, and the presence of a queen assured, it should be done at once. It is no use wasting time on queenless bees at this season. If worth re-queening at all there may yet be time to do it in, but none too much. If not worth it, uniting is the only way of utilising the bees if worth saving at all. Briefly, then, the points which can no longer be neglected are (*a*) queen, (*b*) food, and (*c*) bees. The first should be young, the second weigh 12 lb. to 20 lb.—the latter for preference—and the third, not less than four or five frames, well covered with bees. The rest must then be left to "time."

ROXBURGHSHIRE BEE-KEEPERS' ASSOCIATION.

The annual exhibition of this flourishing association was held in the Corn Exchange, Jedburgh, on 15th ult. The association is to be congratulated on the success of the show both in point of entries and of the high quality of the exhibits in every department. The R.B.K.A. is one of the leading local associations in Scotland. It is affiliated to the Scottish B.K.A., and has a membership of about 100. The hall was tastefully decorated with flowers. Several silver medals were presented as first prizes by Lady Gibson-Carmichael. Messrs. C. Chouler, Dalkeith Park, Dalkeith, and John Wishart, assist.-sec. S.B.K.A., Castlecraig, Dolphinton, judged the exhibits, and made the following awards :—

Collection of Honey not exceeding 100 *lb.*—1st, Thomas Clark, Jedburgh ; 2nd, J. Whellans, Edgerston, Jedburgh.

Observatory Hive stocked with Bees.—1st, G. Cumming, Langholm ; 2nd, Dr. Fyfe, Jedburgh.

Collection of Appliances.—1st, G. Cumming.

Twelve 1-*lb. Sections.*—1st, Harry Wood, Lichfield ; 2nd, G. Ormiston, Jedburgh ; v.h.c., Thos. Clark ; com., G. Wilson, Kelso.

Design in Honeycomb.—1st, withheld ; 2nd, Harry Wood.

Best Hive made by Exhibitor.—1st, Nichol Dodds, Melrose ; 2nd, J. Cranston, Jedburgh ; com., T. Clark.

Six 1-*lb. Jars Granulated Honey.*—1st, Dr. Blair, Jedburgh ; com., Thomas Clark.

Beeswax.—1st, G. Ormiston.

1-*lb. Section Clover*, 1-*lb. Section Heather*, 1-*lb. Jar Clover, and* 1-*lb. Jar Heather Honey.*—1st, Adam Oliver, Jedburgh.

Super of Clover Honey (county only).—1st, Jas. Whellans ; 2nd, Jas. Veitch, Jedburgh ; h.c., T. Ellis, Jedburgh.

Super of Heather Honey any weight (county only).—1st, T. Ord, Jedburgh.

Six 1-*lb. Sections.*—1st, Jas. Whellans ; 2nd, G. Wilson.

Six 2-*lb. Sections.*—1st and 2nd, Robert Millar.

Twelve 1-*lb. Heather Sections.*—1st, T. Clark.

Six 1-*lb. Heather Sections.*—1st, James Veitch.

Bar-frame of Honey.—1st, Jas. Kerr, Birkenside, Jedburgh ; 2nd, Dr. Fyfe.

Super, any weight.—1st, Walter Oliver, Jedburgh ; 2nd, T. Clark.

Super 7 *to* 10 *lb.*—1st, T. Mabon, Jedburgh ; 2nd, Jas. Whellans.

Heather Super 7 *to* 10 *lb.*—1st, Jas. Whellans.

Super of Honey not under 10 *lb. in weight.*—1st, Jas. Whellans.

Six 1-*lb. Jars Extracted Honey.*—1st, H. Wood ; 2nd, W. Marr, Jedburgh.

Six Pounds Extracted Honey.—1st, H. Wood ; 2nd, Alex. Anderson, Hawick.

Six lb. Extracted Honey.—1st, T. Clark ; 2nd, Alex. Anderson.

Beeswax.—1st, G. Ormiston ; 2nd, W. Marr.

Wasp Byke.—2nd, Wm. Linton, Jedburgh.

New Invention in Appliances.—Dr. Fyfe.—(*Communicated*).

HONEY SHOW AT KILMARNOCK.

An exhibition of honey and bee-produce took place in connection with the great Cheese Show and Fair of the Ayrshire Agricultural Society, in the Corn Exchange Hall, on the 26th ult., and was attended with gratifying success. Fortunately, the weather proved fine, and there was a very large turn-out of visitors, the amount drawn for admission being £174. 10s., as against £166. 6s. 6d. last year.

The entries in the bee department numbered 111, and the quality of the exhibits staged was exceedingly good.

Mr. Geo. D. Gordon, of Glasgow, acted as judge, and made his awards as under :—

Six 1-*lb. Jars Extracted Honey.*—1st, Wm. Hogg, Castle Douglas ; 2nd, Ross & Kerr, Dumfries ; 3rd, John Howard, jun., Stewarton ; v.h.c., R. Cameron, Stewarton ; h.c., W. Gilchrist, Castle Douglas ; c., W. Graham, Annan.

Six 1-*lb. Sections.*—1st, W. Hogg ; 2nd, Ross & Kerr ; v.h. and h.c. Alex. Pollock, Tarbolton ; c., R. Paton, Galston.

Six 1-*lb. Heather Sections.*—1st, J. M'Donald, Kingussie ; 2nd, J. and T. Henderson, Kilmalcolm.

Six 2-*lb. Sections.*—1st, Wm. Hogg ; 2nd, Ross & Kerr : h.c., J. Murdoch, Kilmarnock.

Six 1-*lb. Jars Granulated Honey.*—1st, John Ramsay, Hurlford ; 2nd, Ross & Kerr ;

v.h.c., W. Graham; h.c., J. and T. Henderson; c., Wm. Hogg.

Beeswax.—1st, Wm. Hogg; 2nd, Harry Wood, Paradise, Lichfield; v.h.c., John Brown, Newmilns; h.c., John Ramsay; c., Jas. Murdoch, Crosshouse.

Two 1-lb. Jars Extracted Honey.—1st, J. Ramsay; 2nd, Richard Dodd, Tarporley, Cheshire; 3rd, C. B. Anstey, Grandpont, Oxford; v.h.c. and h.c., Wm. Hogg; c., A. Montgomerie, Kilmaurs.

Two 1-lb. Sections.—1st, Wm. Hogg; 2nd, W. Graham; 3rd and h.c, Alex. Pollock, Tarbolton; v.h.c., John M'Donald; c., Hugh Smith, Tofts, Tarbolton.

Design in Honey Comb.—1st, Ross and Kerr.

Super of Flower Honey.—1st and 2nd, Wm. Hogg; v.h.c., Ross & Kerr; h.c., A. Montgomerie; c., John Walker, Kilmaurs.

Super of Heather Honey.—1st, John Walker; 2nd, J. and T. Henderson.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

AWARDS AT THE DAIRY SHOW.

[2094.] I think the editorial note appended to Mr. C. Atkinson's letter (2093, p. 428) is not quite correct. Classes 68 and 69 were for bee-keepers only, because all the honey classes were restricted to the product of the exhibitor's bees.

But this is a small matter compared with the main contention of Messrs. Atkinson's and Woodley's protests. I sympathise with them both, and freely admit that to the meagre, and, therefore, ambiguous wording of the schedule by the B.B.K.A. committee their disappointment is largely due, and as a member thereof I accept my own share of the blame. I remember the schedule coming before the committee; the object of class 68 (112 lb.), and 69 (28 lb.) was to attract exhibits (*a*) in quantity, (*b*) in quality, (*c*) in convenient commercial, wholesale form, by which latter expression I understand that the honey be put up presentably in portable shape, and properly protected. "Presentability" is a prime commercial consideration, because it attracts purchasers, and in the term "commercial package" there was wide scope for the ingenuity of exhibitors to devise presentable and novel forms, and this point naturally weighed with the judges. I sympathise, too, with the judges, for they have a difficult and thankless task, and frequently it gives them positive pain to discriminate in difficult circumstances to the seeming disadvantage of the most deserving exhibits.

The committee of the B.B.K.A. should have added the following clause; it is similar to that used for the parcel post egg-package competition (twelve eggs have to be sent to the show by post), in which the quality of the eggs is expressly stated to be an element for consideration in the awards:—

"Price of package, exclusive of the honey, to be stated; weight, cost, and security of of package to be taken into consideration, as well as the quality of the honey."

I hope Messrs. Atkinson and Woodley will not take their disappointment too much to heart. The experience (purchased, unfortunately, at their expense) is most valuable, and they may rest assured that the lesson is not likely to be lost on the B.B.K.A. As my initials are found in a trite expression apropos to the subject, I beg to subscribe myself

"EXPERIENTIA DOCET."

DAIRY SHOW.

[2095.] I am obliged by your insertion of my letter in this week's JOURNAL, but from the tone of your editorial footnote I think you have not quite understood it. I sent my honey to show, as I say in my letter, in lever tins enclosed in boxes. The same were unpacked, I presume, by the show official, and placed on the bench, and the empty case put to one side. When, about noon, I saw my honey in competition I certainly thought it in every particular met the requirements of the schedule and could be said to be "in decent presentable form on show-bench." I exhibited something less than twelve stones of honey, which was sent in three boxes. At the close of the show I, unfortunately, could not be present to see to the packing up of honey. A gentleman, however, kindly promised to look to it, and this he did, so he informs me, all save placing on the lorry. After this, it seems, a dishonest hand, employed by carriers, must have got hold of one of the cases and prised up the lid, that had been fastened down with nails, and then—and not till then—could he get at the lever lid of the tin. Your footnote says "that something more than a lever-lid tin is required for its (the honey's) protection," and quite ignores (unintentionally, it may be) the fact of the lever tins being packed inside wooden case with case-lid nailed down. It has certainly been a daring theft, but one that is not by any means unknown. Cases of tinned meats and of Swiss milk have some-

times had the lid of the case taken completely off, and the contents of one or more of the tins extracted, the empty replaced, and all again fastened down. It's not an uncommon thing, either, to have a cask of costly wine broached in transit. And yet nobody would think of charging the purveyors of these goods with using other than suitable commercial packages. I should consider it a more daring stroke to open a nailed-down packing-case than for a man to take his pocket knife and in an instant either cut or pull away or break the loop from which the lock hangs on the wicker case favoured at the Dairy Show. Another neat method of stealing from this package would be to strike the basket work a smart blow under the shoulder of tin, when in every probability the lid would be started, and running the honey through the wicker-work would be simplicity itself. Of course, the cause of the leakage would be put down to the chapter of accidents. Since the Dairy Show I have consulted some of my customers, and I find that they prefer to pay for packages and deal with contents at their convenience rather than have to find a vessel of their own into which to run the honey, and also have to pay carriage of my returned empties, the last item being often quite one-half the cost of package. For many years I have sold a fair quantity of extracted honey packed as previously described, and can safely say that not one package in ten has been returned empty. It was hardly necessary in your footnote to inform me that I was not obliged to show unless I chose. For some few years now I have been aware of my right of choice, and have invariably exercised it in one direction, and I'm quite sure I should not have troubled to exhibit at the recent show had it not been for the request in the JOURNAL that bee-keepers should support the show by making a good display. You also inform me these classes were open to all, and not restricted to bee-keepers. The schedule has it that "the honey shown must have been gathered by exhibitor's own bees," evidently, then, it is restricted to bee-keepers. But to suppose that I either expect or desire that appliance dealers who are also bee-keepers should be excluded from showing is to put a construction on my letter that I think it cannot bear. What I contend is, that the judges did not award the prizes to "extracted honey in commercial packages" according to the evident intention of the framers of the schedule (see the opinion I quote in my last letter), but that they gave the awards to the "cases containing the commercial packages." The B.B.K.A. has in the past cautioned bee-keepers against new and untried appliances; but if this kind of judging is persisted in, it means that they in future, if they are desirous of gaining prizes, will have to join the ranks of "inventors of appliances" who show honey. I am pleased to find Mr. Woodley (whose acquaintance I was glad to make at the show, but with whom respecting these classes I didn't exchange a single word) holds views very similar to my own, but gives them infinitely better expression.—CHAS. ATKINSON, *Tockwith, October* 26, 1894.

[We fear that our correspondent does not quite appreciate the delicacy of the position in which individual editors of this journal are placed under the circumstances dealt with in the above communication. We may, therefore be allowed to say—gentlemen who accept the duties of judging cannot (or ought not) enter into a discussion with disappointed exhibitors as to the justice or otherwise of the awards they have felt it their duty to make. We are still more sorry to find the difficulty of our position increased by the importation of an editorial footnote into the discussion, and trust we shall not be misunderstood in expressing a hope that our correspondent will be content with the full ventilation of his views on the subject which have appeared in our last two issues, and kindly allow the matter to drop without a further reply on our part.—EDS.]

DAIRY SHOW.

"COMMERCIAL PACKAGES."

[2096.] If you will allow me space, I would just like to pull friend Woodley up a bit *re* his statement on page 426 of last week's B.J., which seems to me a little misleading, so far as it implies that Mr. W. considers his honey would have been placed before mine but for the package. Now, when at the Dairy Show, we had some friendly chat, and in course of it sampled our respective exhibits as staged, and Mr. Woodley—who should be a judge of honey—expressed the opinion that my honey was equal to his own. I don't suppose this was said to mislead me, but as his candid opinion, and so what comes of the "box and basket" winning the prize as stated?

It seems to my mind a "commercial package" is to all intents and purposes a proper receptacle for honey—either a box or a basket—which does not leave the contents to the tender mercies of carriers or railway officials, or any one else who handles it. A self-opening tin is no protection, and I contend, quite as earnestly as those who take an opposite view, that my reading of the schedule of the Dairy Show was a correct one, and carried out to the letter. My package, though only of light wicker-work, was strong enough to travel the world over. It was also presentable at any gentleman's house, or to stand in any grocer's window—in fact, more of a "commercial package" than an old "Hudson's soap" box.

I should know something of packing stuff to travel safely, seeing that I pack and send away every season hundreds of baskets of fruit—ripe and green—to all parts of the

kingdom, besides roses, eggs, and honey; and in fifteen years I have not had one complaint. What I do I try to do well, and this was the course I followed at the Dairy Show.

I trust Mr. Woodley and I are not going to have any lessening of our friendliness on account of my plain speaking, but I think he should read, mark, learn, and inwardly digest the next schedule, and not be hard on me because of having gained a first prize over his head after three years' showing at the "Dairy Show." I must say I enjoyed my week's holiday at the "Dairy" and the conversazione very much, and the main pleasure I had was in meeting our good friend "Notes by the Way" and other prominent members of the craft in pleasant fellowship.—R. Brown, *Somersham, October* 2.

BEES IN A ROOF.

[2097.] I send you a short sketch of a bee visit I made a few days ago. The last time I saw Mr. Carr he commended my making myself useful amongst our bee-keepers in South Wales, and by what I am about to say, you will see we are still at work.

Some months back Mrs. Thomas, of Llethereleistry, in the parish of Llanddavy, Carmarthenshire, wrote to me in reference to some bees in the roof of the house where Captain Thomas now resides, but nothing further was done until a few days ago, when Mrs. Thomas obtained permission for me to pay a visit, and see the position of the bees, and what would be required to dislodge them. In the meantime I had ascertained that bees had been in the roof of this mansion for upwards of forty years. I now thought it would be no small matter to remove them, so I decided to ask a friend, Mr. Taylor, head gardener to E. H. Bath, Esq., of Athyferen, who takes a great delight in bees, to accompany me. Having fixed the day, the Captain sent his carriage for us, and on arriving I found the bees going in through the slates in large numbers. We found a third person ready to assist us—one of the masons on the estate, who was very serviceable. In a short time I took off a few slates, and found that under these there was a good thickness of cement, or something of the kind, and underneath the rafters it was boarded. The bees had, however, gone right through slates, cement, and boards, and taken up their abode beneath the boards, so that there was only a lath-and-plaster wall between the bees and the room below. After ascertaining the exact position, about ten slates were removed, and one of the boards was sawn in two. Then Mr. Taylor and I remounted, and commenced to take out the comb and honey, Mr. Taylor handing me the tools, and in a very short time I saw that we had a fine lot of bees, comb, and honey. By this time the bees had settled down a little, and both the Captain and Mrs. Thomas came up to have a look at the finest show, I suppose, of the kind that has ever been seen in Wales. Mrs. Thomas then measured some of the combs, which were 3 ft. 9 in. long and 23¾ in. wide. From this you will judge that a fine quantity of honey had been secured. After about three hours' work both bees and honey had been removed, and the bees placed in a new frame-hive, into which I had tied some of the combs with honey. But I found that the bees, although strong, had no queen. On returning from there in the evening I came across a neighbour who had a stock waiting to go to the sulphur pit, and I asked him to allow me to drive the bees instead of killing them. This I did a few days later, and found they had a fine young queen. I united these to the bees taken from the roof, shaking them off each frame and dusting them with flour, and now they are a fine stock for wintering. I have no doubt, if all goes well, both the owner and the bees will do good work when the season comes round, for I am happy to say that both Captain and Mrs. Thomas are already enthusiastic in our favourite pursuit. I may say that Captain Thomas belongs to a family who at one time had over 100 hives in one of the English counties. I am sure all our bee-keeping friends will wish them every success.—A. Hamer, *Llanarthney, Carmarthenshire.*

A HARD CASE.

[2098.] I discovered last week in a neighbour's garden four bar-frame hives, in one of which the bees had recently died through being weak, and then robbed by the other bees; this was an old stock. In another old stock the bees were also weak, and on the centre of four frames were large patches of foul brood. In a third case a swarm of this year, put into old hive and old combs, was a fairly strong lot of bees, but had foul brood very bad. The other hive, a good swarm and plenty of honey, was, so far as I could see, free from foul brood. I transferred the frames and bees from this last stock into a new wood hive, and put plenty of naphthaline in quilts. I also advised the owner to burn all contents of first three hives, but he is not willing to do so. What would you advise me to do, as I have eleven stocks within a quarter of a mile all packed up for winter, and I am afraid the disease may reach me?—J.C.

[The above is another notable case exemplifying the need for compulsory powers to compel the destruction of diseased hives standing in the open, and accessible to the bees of a whole neighbourhood. How is it possible to stop the spread of so terribly infectious a bee-disease as foul brood, when persons will not make an effort to remove the source of danger? But, as the law now stands, we cannot advise anything beyond an appeal to your neighbour's sense of justice, as well as pointing out the fatuity of the course followed, which makes it impossible to keep bees

successfully himself, and at the same time prevents others from doing so. Under the circumstances detailed above, and at this season, to attempt to cure the bees would be a waste of time.—EDS.]

QUEEN-REARING.

[2099.] I have been much interested in reading the letters from your correspondent Mr. Brice, *re* queen-rearing, but there are one or two portions which are not quite clear to me. On page 385, near end of first column, Mr. Brice says: "I prefer the fixed centre-bar, with an easily removable bottom bar." When the preparation of the frame was described, I do not think the "removable bottom bar" was mentioned at all. Again, page 395, column 1, when explaining how he shaves down the cell containing the grub to ⅛ in., and transfers the remains of the cell and the grub to the interior of the royal cell, is there no danger of the contents becoming displaced when the royal cell is inverted to its natural position in the frame? How are the cells removed from the prepared frame to nucleus hives, and how are they fixed in those hives? seeing that there is no surplus comb attached to the queen cell by which it could be fixed to a comb in the nucleus. I hope my questions will be excused, as I have no experience in queen-rearing, but, as I said before, the letters have created a deep interest in the subject.—W., *Stafford, October* 28.

LANTERN SLIDES.

[2100.] As I continue to receive applications concerning the hire or sale of the above, would you kindly allow me to state that I do not now sell slides on bee-keeping, and have never hired them out.

Messrs. York & Son, the well-known lantern slide publishers, have however issued a set of thirty slides on the subject from new negatives by me, and also publish a lecture or reading by me to accompany the set. They have presented a set to the British Bee-Keepers' Association, who will, I hope, be able to lend or hire them out.—ALFRED WATKINS, *Imperial Hills, Hereford, October* 23, 1894.

BEE SMOKERS.

[2101.] Referring to your answer to 1189 (p. 429), I may say that I, as a beginner of this year in bee-keeping, found the same inconvenience, *i.e.*, requiring some one to use the bee-smoker when going through the hives. I have now completely discarded it, and when I at any time have to handle the bees, either in taking supers or examining frames, I simply light my pipe and blow the tobacco smoke upon the bees as required, thereby doing away with the stoppage of operations, which at times the smoker necessitates (that is, unless you have some one to help you); I also found that I had greater confidence in handling the bees, pipe in my mouth, than with the smoker, and when I say that I have had an average of twenty full sections which I took out by lifting a portion of the quilt, blowing a little smoke down, taking sections out one at a time and brushing the bees off (brushing down hill) with a feather, and afterwards examining the frames before I closed them down for winter, and was never even stung once, I think you will acknowledge that I have not done amiss.—G. T., *Huddersfield, October* 25.

HUNGER SWARMS.

[2102.] A rather extraordinary occurrence took place among the bees of a cottager friend of mine, who has seventeen skep hives in his garden. On Saturday last, about 1.30, he was in the garden, and the sun was shining (for the time of the year) rather brilliantly, when out of one of the skeps issued a small swarm about 2 lb. in weight. They settled on a black currant bush about 2 ft. from the ground and stayed there for some little time. It so happened that the man's wife (who is also the "beemaster") was at the time away from home, so he watched them, and they shortly returned to the hive. I thought this may be of interest to your readers, of whom I am a very interested unit, and I should also like to know if this is of frequent occurrence, and to what cause it can be attributed.—HARRY E. STONYER, *Hereford, October* 29.

[The skep from which the "swarm" issued is probably ill provided with food, maybe on the point of starvation, for the occurrence can only be classed as an autumn "hunger swarm," which issue at times after a season of scarcity. —EDS.]

DEATH OF MR. J. J. CANDEY.

Mr. R. J. Stent, Barngreen, Hants, under date October 23, writes as follows:—

"I herewith enclose a cutting from a local paper, in case you should not have received notice of death of Mr. J. J. Candey, who was a well-known and respected bee-keeper in this district, and a personal friend of my own. I hope some one better able than myself to do justice to his memory will notice his work amongst bees and bee-keepers in your excellent JOURNAL. I may say that hearing Mr. Candey lecture on bees and bee-keeping was my first introduction to the science, and I am indebted to him for many useful hints and ideas on the subject."

Somewhat condensed, the cutting referred to reads as under:—

"We regret to have to record the death of Mr. John J. Candey, of Commercial-road, Landport, who succumbed on Tuesday,

October 16, to an attack of apoplexy, with which he was stricken about a week ago. Deceased was a highly-respected member of the community, and from his sterling character enjoyed the friendship and esteem of all who knew him. He was an earnest advocate of temperance, a strong supporter of the early closing movement, and took a lively interest in Sunday-school work. Bee-culture was his principal hobby, and in this connection he was justly regarded as an expert. Mr. Candey, who was 48 years of age, leaves a widow, but no children."

Queries and Replies.

[1193.] *Self-hivers and Swarming.*—I have only been a reader of the B.B.J. for about three months, but that is quite sufficient for me to see of what service it is to bee-keepers. It reminds me of the pens, as being "a boon and a blessing to men," and bees, for the matter of that. It not only shows us the way to escape being stung, and the way to get the greatest amount of honey from the bees, but teaches us how to let our busy little workers die a natural death, instead of murdering them as of yore, and as, indeed, is now done here in Monmouthshire. I am anxious that one of my hives should swarm next season (I have been in the habit of discouraging swarming by division, or artificial swarming), and as I am from home in the part of the day they are most likely to swarm in, I am thinking of trying the self-hiver to save the swarm. Will you kindly give me your experience and opinion of this appliance? Also, can I make one with excluder zinc myself? I make all my hives except the frames.—J. M., *New Inn, Pontypool, Mon.*

Reply.—Though good progress has been made in devising a reliable self-hiver, we fear it cannot yet be said that perfection has been reached. You will find some full reports regarding the best of them in our pages. But why not make an artificial swarm from the stock you wish to have a swarm from? That would be quite an easy way of attaining your end, and if done at the proper season will be an easy job.

[1194.] *A Beginner's Queries.*—As I wish to commence bee-keeping next spring, will you kindly answer the following questions? 1. In Cook's "Bee-keepers' Guide" (American), pp. 250, 288, 289, he advises that swarms be hived upon "starters" in the frames, and the crate of sections at once put on, when it will be filled. Is it practicable in England? 2. What is the average price of an artificial swarm in April and in May? 3. Also the price of a natural swarm in the same months? —English bees in both cases.—Ignoratio, *Thornton Heath, October* 24.

Reply.—1. It is, of course, quite "practicable" to *try* the plan referred to, but however it may answer in America, it is not found to succeed here, the plan usually followed in this country being to allow the swarm time to nearly fill its hive with combs before setting on the section-rack. 2. April is too soon for artificial swarming, and, unless in very forward seasons, bee-keepers are averse to supplying them so early. In May they may be had at various prices, according to weight—about 3s. or 3s. 6d. per lb. being a usual charge. 3. Natural swarms are obtainable from 10s. upwards, our advertising pages at the time affording full information thereon.

[1195.] *Drones and Queenlessness.*—About a month ago, when at the heather, I noticed one or two drones in a bees' frame hive that had cast twice, and again a few days ago (the weather being fine) I saw half a dozen or more drones still there. The bees were then carrying in pollen very hard, much more so than in any of the other hives, and it seems strong in workers. Will it have a drone-breeding queen?—J. Menzies, *Duns, N.B., October* 27, 1894.

Reply.—Drones at this season usually denote queenlessness, but as free-pollen carrying means brood-rearing, the probability is there is an unfecundated queen in the hive.

[1196.] *Space Below Frames in Winter.*—As it appears to be almost indispensable to have a space below the combs in winter, will you kindly inform me (1) if the lower sliding chamber in the "Ford-Wells" hive has any board on the top in summer, or is it simply left in summer as in winter, as shown in the maker's catalogue? and (2) do the bees climb through it going in and out? I want to make a provision of this sort in some I shall make this winter.—La Ruche, *Wakefield, October* 24.

Reply.—1. There is no covering used for lower chamber of the "Ford-Wells" hive either winter or summer. 2. Yes.

CHOOSING A LOCATION FOR BEES.

UNDERSTANDING A LOCALITY IMPORTANT.

A few days ago I received a letter bearing on an old subject, that of locality, from a bee-keeper having formerly lived in the North, but now removed to the South, telling how much different the seasons were there, &c., the writer closing by saying, "I did not know nor realise before how much was dependemt upon this matter of location."

From the many letters of inquiry which I get, it would seem that the matter of location, although an old subject, was a theme which is almost entirely ignored by the great mass of bee-keepers, or, at least, by the greater share of those who write to me asking questions. I had been contemplating, for some little time, writing an article for the *American Bee*

Journal, on the understanding of a locality, and as the letter lately received has brought it fresh to mind, I will venture a few words on the subject, hoping that all who read it will be led to look into their locality more closely.

The writer of the letter says, "Different locations required radically different methods of management to obtain success." While all of the rest of his letter I think is sound, I cannot help thinking that this sentence is a mistake, so far as the time of commencing to prepare for the harvest is concerned, for that should be done in reference to the blooming of the flowers which yield honey, no matter where we are.

In nearly all localities where bees can be kept there are certain plants or trees which give a yield of surplus honey at a certain time of year, while, aside from this, there is little more honey obtained by the bees than is needed to supply their daily wants. Some localities give a surplus at three stated periods, others at two, while the majority give only one such yield. Hence, it is apparent to all, that if such a honey-yield, or yields, pass without a surplus, none can be obtained during the season. From this it will be seen that, in order to be a successful apiarist, a person *must* have a knowledge of his or her locality, whether they live in New York, Canada, California, Florida, or Cuba, and also how to get the labourers (bees) in the right time, so they can be on hand at the time of the honey harvest. Failing to do this, there is no profit in apiculture, and I cannot see why this will not hold good in any section of the world, except in the time of commencing to secure the bees.

First, then, we have the location. Here in central New York our honey crop comes mainly from linden or basswood, which blooms from July 5 to July 15, and lasts from five days to three weeks, according to the weather; while in other localities of this State white clover is the main crop, coming in bloom June 15 to June 20; and again, in others, buckwheat, yielding honey from August 10 to August 20. Other States, without doubt, have as great a variation as to the time of surplus honey as has this, and it should be borne in mind that it devolves upon the reader of this to ascertain, by careful watching, just when and what is the source of their surplus honey crop, so as to work accordingly.

After having determined just when we may expect our honey harvest, the next step is to secure the bees in just the right time for that harvest—not before or afterwards—yet how few pay any attention to this matter, letting the bees take care of themselves, and thus they are generally produced so as to become consumers instead of producers. This is one of the reasons why so many persons who enter the ranks of bee-keeping make a failure of it.

The queen is the mother of all the bees, she laying all the eggs which produce them. She is capable of laying from 3,000 to 4,000 eggs a day, yet often she is laying only from 500 to 1,000 eggs daily, at the time she should be doing her best. After the egg is laid it takes three days for it to hatch into a larva. This larva is fed six days, during which time it has grown so as to fill the cell, when it is capped over and remains hid from view for twelve more days, when it emerges a perfect bee, making a period of twenty-one days from the egg to the perfect bee. This bee now works inside of the hive for sixteen days more, doing such work as feeding the larvæ, building comb, &c., when it is ready to go outside as a field labourer; and at forty-five days from the time of hatching it dies of old age, and another generation takes it place.

From the above it will be seen that the egg must be laid at least thirty-seven days before the honey harvest, in order that the bee have the opportunity of labouring in that harvest to the best advantage. Now, if the harvest is white clover, commencing to bloom say June 18, the eggs for our labourers should be laid on or before May 2; if basswood, bloom-about July 10, then the eggs should be laid on or before June 3, and so on, for any yield that may come in our locality, whether we are in Canada or Cuba. The principle is the same for all localities where there is an intermittent flow of honey, and I cannot see where any "radical change" of this mode of management can be made, no matter in what part of the world we may have our home.

If there is a steady flow of honey all of the year, during which the bees are active, then we should aim to keep the bees strong in numbers all the time; but where one such place is found fifty others can be found that give large yields only at certain periods, when certain flowers are in bloom. Only as the locality is thoroughly understood, and the bees reared to apply to that locality, can we secure the best possible results. To keep the results obtained, just as few bees should be reared at all other times as is consistent with keeping the colony where it can be gotten in good working order when we wish it, so as to secure the harvest, otherwise we are supporting a horde of useless consumers.

I know this is an old theme, but it is the one which has helped me to secure the results of the past, namely, that of securing a good yield of honey during all the past twenty-one years; and if understandingly followed it will help others the same as it has me. Try it, brothers and sisters and see if I am not right.
G. M. DOOLITTLE, *in Am. Bee Journal.*

LIBELLING THE BEES.

A news cutting sent to us says:—"Experiments have been made by Dr. Buchner in submitting working bees to a regimen of alcoholised honey. The effect is astonishing.

They revolt against their queen, and give themselves over to idleness, brigandage, and pillage until they are cast out by their fellows."

STRENGTH OF THE BEE.

A widely-read contemporary is responsible for the following :—"A London naturalist, who has a taste for the curious in science, has recently made a series of experiments to test the strength of insects as compared with the strength of other creatures. He finds that, in proportion to its size, a bee can pull thirty times as much weight as a horse."

REVIEW OF CONTINENTAL BEE PAPERS.

BY J. DENNLER.

1. *L'Apiculteur.* Thirty-eighth year. Editor, E. Sevalle, Paris.—The second number contains an interesting article on "Bees as Incubators." A new sort of incubator has been just discovered by a bee-keeper, M. Beaune, of Villeneuve-sur-Fère (Aisne), and which has been brought to our notice by M. Pétel, of Fère.

Whilst mowing a meadow M. Beaune came across a splendid partridge's nest containing fourteen eggs, already partly hatched. This was in the beginning of July last. After carefully collecting the eggs, M. Beaune returned to his house, deciding to attempt the completion of the hatching. Unfortunately he had no artificial incubator, and as he could not find a broody hen for the purpose, an original idea struck him. Having some frame hives, amongst them he found an Abbott hive, containing a strong May swarm, and on the top of the frames he placed a sheet of wadding, and on this the eggs, which were covered with another layer of wadding, and the box was completely filled with oat-chaff.

Eight days later, without having touched the eggs, he had the satisfaction of their hatching fourteen small partridges. They were removed, placed in a box lined with wadding near the fire, and fed with a paste made of ants' eggs mixed with yolk of egg and crumb of bread. The small birds were then replaced on the hive. They were thus kept for four days, and then given to a neighbour.

We thought it would be interesting to know this method of rearing. It may be that it will open a new channel of interest to the bee-keeper and a new method of incubation.

It is not astonishing that this sort of incubation is possible, as the temperature required for hatching is nearly the same as the average temperature of a hive. Moreover, a moist heat is required, which obtains in a hive. It is simply necessary so to arrange the top of the hive as to best retain the heat produced by the bees, and there should be no difficulty in doing this. What is curious about this experiment of M. Beaune, is that he tells us he did not turn the eggs, as is usually done with artificial incubators, but he simply looked at them from time to time.

At any rate, we shall be pleased to know the result should other bee-keepers try the experiment.

Russian Method of Making Hydromel.—Pure honey, 15 kilos. ; water, 45 litres. Boil this mixture on a clear fire until it becomes, by evaporation, of a consistence capable of allowing an egg to float on its surface. The liquid must then be divided into two equal parts, one being placed in a pitcher and put in the coolest place to be found, so that it should ferment as slowly as possible ; the other half of liquid must be placed in a suitable barrel, which must only be half-full.

The barrel, on a stand, is placed near the fire or by a stove ; a piece of coarse canvas is put over the bung-hole, which requires no other closing. A rapid fermentation commences, and continues for about three months.

A thick froth pours out continuously from the bung-hole, and runs into a basin placed under the barrel to receive it. The loss caused by the issuing of this froth is made up by the liquid set apart in the pitcher for this purpose.

When the fermentation has ceased, two or three litres of old wine are added to the hydromel, the barrel is taken down to the cellar, and a muslin bag is suspended inside it, containing crushed cinnamon, a few cloves or fresh lime blossoms (or instead can be added later when the hydromel is put in bottles), pure essence of roses and a little carmine for colouring.

At the end of a year the hydromel can be bottled, and it must be kept for another year if it is desired to have it good, for it improves by age, like other wines, which it very much resembles. I would add that in many parts of Russia where this hydromel is produced, that flavoured with rose or lime blossoms realises, for a cask about the same size as is usually used for Bordeaux wine, according to the quality, from 60 to 400 roubles (£6 to £40).

Bulletin de la Société d'Apiculture de la Somme. Nineteenth year, Vol. V., No. 102. *New Remedy for Influenza.*—To half a breakfast cup of hot honey put the juice of a lemon, and take as a dose two teaspoonsful of this mixture, and as often as you can take it, as hot as it can be borne. In the event of its producing nausea, and it cannot be retained, two or three spoons of milk will remove the unpleasantness.

A New Honey Plant.—Polygonum Sachaliense.—This is a perennial decorative plant of strong and rapid growth. It flowers during the summer months, and is eagerly visited by the bees. Moreover it can be used as a forage plant, and the young leaves form an excellent vegetable for the table during

summer, as it is less acid than sorrel, and less insipid than spinach. Any soil suits it, and it will stand any amount of cold. It dies down in the autumn, and throws up shoots 3 ft. to 6 ft. high during the growing period, and will give three or four cuttings. It comes from the island of Saghalien, in the sea of Okhotsk.

Colmenero Espanol. Editor, Mercader-Belloch.—Foul brood is plentiful in Spain, and a number of remedies more or less successful are recommended and tried. The new hives introduced are, for the most part, those opening from the top on the English plan.

Le Rucher, the organ of the "Société d'Apiculture de la Region du Nord," 11th year. Vol. V., No. 1. *Anarchist bees.*—It appears that there is a method of producing anarchist bees. This method, from experiments by Dr. Büchner, is both simple and easy. It consists of subjecting the worker bees to a diet of honey and alcohol.

These insects quickly take a liking to this pernicious food. Under its influence they first lose the instinct to work so normal with bees, they then lose that of hierarchy, usually not less strong in this species. They become anti-social, revolters, and without the slightest scruple abandon themselves to robbery and brigandage. This curious and suggestive experiment has been cited by the celebrated Professor Lombroso in the Italian archives of criminal psychology and anthropology.

Trefolium Incarnatum is strongly recommended by "Le Rucher" as both a honey and forage plant. The early sort flowers end of April, and the late sort about the middle of May. It is sown at the end of summer or early autumn.

American Competition.—It is stated in the same paper that in America there are more than twenty companies, each having from five to six million francs capital (£200,000 to £240,000) [Rather doubtful this.—EDS. B.J.], which they employ in covering a large surface of the American territory with apiaries. Every farm has its apiary, not only for the purpose of getting honey, but principally for the fertilisation of flowers.

According to the experiments of Darwin, it has been proved that the proportion of plants fertilised by bees averages between 50 and 60 per cent.

Illustration. October number. *Artificial Honey.*—At a meeting of the members of the "Society of Applied Chemistry," in Bavaria, a new product, introduced into commerce under the name of sugar honey, was mentioned. This artificial honey is a sort of syrup, composed of water, invert sugar, some saline substances, and free acid. It has the taste and odour of real honey. Chemical analysis has not detected anything differing from the honey of bees. Contrary to the usual artificial products, this honey appears to be an inoffensive product, not to be detected from real honey, and costs very much less. If it is also discovered how to make wax, the bees will serve no further purpose than to produce stings. [We do not think this artificial product will replace honey, for it is the peculiar aroma of this that gives it its special value. Chemical composition, as ascertained by analysis, goes for very little; but quality, which is beyond the present knowledge of the chemist, goes for a great deal. Tea has no more value chemically than sloe leaves, but a connoisseur would hardly pay for the latter what he pays for tea. The composition of leather and meat are almost identical, but one would hardly relish the one as well as the other.—EDS. B.B.J.]

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

W. G. LANGRICH (Farnham).—Captain Campbell, Oak Side, Box Grove-road, Guildford, is hon. sec. of the Surrey B.K.A., and the Rev. W. E. Medlicott, Swanmore Vicarage, Bishop's Waltham, of the Hants B.K.A. Either of these gentlemen will furnish the information required as to membership, &c. The best time to buy stocks of bees is in March or beginning of April, but prices vary so we cannot name the sum you would have to pay for a good stock. Consult our advertising pages at the time, and be very careful to only buy a healthy, thriving colony.

"T.," HON. SEC. (Dalkey).—We should strongly suspect that your correspondent's "six combs of brood" found in a deserted skep at this date will be found to contain foul brood, and that the bees deserted the combs in consequence. Get him to send you a sample of the brood for inspection.

LA RUCHE (Wakefield).—Write to Mr. R. A. Grimshaw, Horsforth, Leeds, who will no doubt give you the information required.

WM. GILROY (Knaresboro').—The granulated remains left in tie-over jar are so suspicious in their character, that we will endeavour to find out by analysis whether genuine or not, and reply later.

H. T. ICINGBELL (Taunton).—Bee cast out is a fine adult queen. Nothing less than an examination of the combs will clearly explain why she was found outside the hive dead at this season. She has no appearance of being an "aged" or worn-out queen, in fact, she may be from another of your hives and got killed by the bees of the stock she attempted to enter. So many explanations may be offered of such occurrences, it is little use us hazarding one.

Editorial, Notices, &c.

A WORD TO OUR HELPERS.

If additional evidence were needed of the continued awakening of public interest in the subject of bee-keeping at the present time, it is amply forthcoming in the quite abnormal number of paragraphs giving more or less accurate information with regard to it which appear in the daily press. To use an expressive phrase, the honey-bee has "caught on," consequently the experienced bee-keeper of to-day finds himself a rather "sought-after" individual, and in almost all cases renders willing help to those who ask for it. That we have no word of complaint to make against this goes without saying, the assistance rendered in this way being, as a rule, both timely and useful. Nor is there any reason why most persons suitably located for keeping a few hives, and judiciously guided, may not do so with advantage to themselves, and also to the public as consumers of honey. We use the words "judiciously guided" advisedly, and in their fullest sense, because it unfortunately happens at times that very sincere friends of the craft in their impetuous fervour—begotten, maybe, of an exceptionally big honey return, secured, perhaps, in a good season and with very favourable surroundings—are apt to paint the pleasures and *profits* of bee-keeping in colours altogether too glowing to stand the test of everyday practical experience. In this way persons may be led to start bee-keeping with an ideal before them which stands but a poor chance of ever being realised.

Not only is this so, but writers on bees, who are usually regarded as tolerably safe guides by the inexperienced learner—not seldom overlook the divergent conditions which attach to the pursuit of bee-keeping as followed in different and widely-apart portions of the kingdom, and, in consequence, do harm where only good is intended. Variation in temperature, north and south, the difference between good and bad honey districts, and also between good and bad seasons, are such important factors in the case with which we are dealing, that to neglect noticing them in teaching bee-keeping is to invite failure. In other words, date, season, and locality, are so all-important, that it becomes imperatively necessary that such teachers as are referred to above do bear in mind the amount of mischief that can be wrought in the performance of bee-work undertaken at unseasonable times, and how considerable an amount of loss and disappointment may be incurred, less through the fault of the learner, who operates injudiciously, than of the teacher whose instruction is not thorough.

We are in some measure led to write words of caution to those who possess claims to be considered helpers in our craft, in consequence of being favoured with a communication from an esteemed correspondent, who, with no personal interest of any kind to serve, takes considerable interest in the promotion of modern bee-keeping among cottagers and artizans in his own county as a means of bettering their condition. Enclosed with our correspondent's letter was a cutting from a religious monthly, such as is usually sold in bulk, and afterwards localised as a parish magazine in the various parishes all over the kingdom in which they are circulated. The cutting is from a somewhat lengthy article on "Bees and Bee-keeping," and in alluding to it our correspondent says:—"The enclosed is, to my mind, so misleading on some points, and particularly with regard to *dates* in such a district as ours—where it is being circulated with the parish magazine—that I cannot help sending it on to you." For comment, we suppose.

The article referred to is written by a clergyman, whose name and address appear below the title already mentioned, and the opening portion reads as under:—

> Bee-keeping in England ought to be more cultivated than it has been. Why should we allow the foreigner to send into England between £4,000 and £5,000 of honey each month into our markets, and allow the tons of honey in the fields to go to waste because we don't cultivate the honey gatherers? *Why, one hive is capable of producing enough honey to pay a cottager's rent!*
>
> I think if this were realised many would go in for bee-keeping as an experiment if for nothing else. It is possible in a good year to realise this. At the end of one season my profits from one hive stood at £7. 10s. But this, I will allow, was obtained from an exceptionally good market. But putting the sale of good section honey at 1s. per lb.

which may be realised in a good market, such as a sea-side town, what an amateur has done once—namely, to produce 104 sections of 1 lb. each, of pure virgin honey, in the comb, out of one hive—he might do again; and if one amateur can do it, why not another? But how is it done? my readers will ask. Well, it was done by the new style of bee-keeping, by keeping the bees in the bar-frame hive, and taking the hive in the month of May and placing it near a white clover field. Before this success was obtained the hive, *in the months of March and April*, in some of those warm days that now and again favour us, *was opened*, and a general spring cleaning took place. The roof was removed. *Each frame was taken up* with the bees upon it, then *rudely shaken* off and *examined carefully*, and *the propolis scraped off, and the frame thoroughly cleaned and overhauled.*

Each frame was *for a time* placed in an *empty hive*, and the same process of examination gone through with every one. The carpets were then temporarily placed upon the frames. Attention was then paid to the cleaning of the body box and the floor board, and when these were cleaned the frames were again restored to their proper place, and the carpets placed over the frames, *and the busy workers were allowed to go on undisturbed. A few days longer and the hive was again visited* by the bee-master, when *an outside comb, where sealed honey* had been stored, was taken from its place, the caps of the honey (not the brood) were sliced or shaved off, having first shaken off the bees that remained clinging to the comb. After this operation the combs were put aside or divided in the centre, and the uncapped frame was placed in the gap, and the carpet put back again. You ask what was the object of this? It was to stimulate the hive to action. The bees from this would imagine that the honey harvest had begun, though perhaps a good three weeks before the flow of honey in the fields had commenced. The bees then set to work and empty the unsealed honey, and carry it back to the outside combs inside the hive, and the queen shares in the stimulus given, and proceeds to fill the empty cells with eggs. *The same process was repeated after a few days*, till the whole hive was brought up to a state of efficiency, *when on or about May 20th, the hive was removed to a white clover field* to take the fullest advantage of the honey harvest that commences at that time.

Excepting those in the first paragraph the italics are our correspondent's.

It need hardly be said that we unreservedly accept the accuracy of the above details and the statements concerning them. But we must none the less point out the almost fatuous unwisdom—from the bee-keeper's point of view—of attempting to carry out such bee-manipulations during "the months of March and April" in the north of England where the article complained of is being read, or, indeed, anywhere else except under the most favourable conditions possible.

The special operation named is that known as "spreading the brood," which has, to a large extent, fallen into disuse because of the mischief wrought by it when performed by inexperienced hands at unseasonable times.

In a word, it is so difficult to believe how the work detailed could be got through in an ordinary season without resulting in "chilled brood" or worse, that it would in the vast majority of similar cases have to be set down as due rather to good luck than good management. "Save us from our friends" is a trite maxim, and while giving due credit to those who desire to assist our craft and who—according to their lights—do their best to promote its interests, we must, nevertheless, venture to suggest (1) that such help as is given—when writing on bees for the enlightenment of beginners or for general reading—should be accompanied by a reasonable moderation as to the profits possible from bee-keeping; and (2) that it be borne in mind how easily may disaster to the beginner be brought about by detailing—without any reservation whatever—operations which must inevitably fail when attempted at the wrong season or in the wrong place.

To sum the matter up, it should be borne in mind by all who assume the offices of teachers or helpers, that to make their teaching sound or their help of real service it should fairly bear out the promises given in it. Otherwise there will be no permanent success for either teacher or pupil.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of September, 1894, was £3,550.—*From a return furnished by the Statistical Office, H.M. Customs.*

WHITE BEES (?).

A correspondent, whose bee-keeping experience is no doubt somewhat limited, sends us a press cutting which reads as follows :—

SOMETHING INTERESTING.

"SIR,—Can any of your correspondents who

know anything about bees throw any light upon the following?

"On the 11th ult. I counted seven white bees —the common honey-bee—flying about the balsams in my garden, and several of them remained for two or three days afterwards. On the same day I noticed a perfectly white earwig. A lady, to whom I mentioned the fact, said she had noticed a half-white wasp, but had never seen white bees. An old clerical entomologist became quite enthusiastic, pronounced the white bee unique, and gave me minute instructions how to secure a specimen; but, unfortunately, they have now all disappeared. Last summer, or rather autumn, I saw a white sparrow, but it is not quite so rare as the white bee."

Our correspondent asks if *we* can throw any light on the subject? to which we reply:—When the balsams—which will no doubt be the giant variety, usually grown outside—have done flowering, the "white bees" will disappear too. It is well-known to bee-keepers that when bees are busy in autumn, gathering pollen from the pocket-shaped blossoms of the giant, or Canadian, balsam, they present the appearance of having been dipped in a bag of flour; hence the white bees.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[2103.] The past fortnight has been a continuance of mild weather; in the week just ending we have had some heavy rains. In fact the weather has been so wet that outdoor work has been practically brought to a standstill, not only in things apicultural, but in the major industry of the country, viz., agricultural. If the feeding up of bees has been neglected or put on one side for more important duties, the bee-keeper must fall back on the sheet-anchor of the tardy one, a large lump of candy. This I would make with pure crystallised Demerara cane sugar, in preference to the white lump sugar often advised in books on beeculture. The season of '88 impressed on my mind the adaptability of pure cane sugar as a good food for bees, and I have used it solely since then. I should not object to beet sugars for spring feeding, but for winter stores I should certainly do so.

I feel that after my "notes" *re* Dairy Show I must ask for our Editors' indulgence for a further comment, and my excuse will be that by these discussions, we get at the necessary knowledge for a future avoidance of the things, or errors? in question.

1st.—*Re* the editorial footnote to 2093. When I read it, I was very sorry for its tone. Said I to myself, that is not "oil on the troubled waters." In future schedules, the class for granulated honey should certainly admit granulated honey of any age—in fact, the age of it should, in my opinion, register points in its favour; don't you see, friends, if we can secure the keeping qualities of honey, we are benefiting bee-keepers. Then as to the safe transit of honey, the golden syrup packed in tins in a case nailed down reached the grocer safely, the same as my honey has always done, and I have not resorted to a padlock yet, neither should I consider that my honey would be any safer under the protection of a common padlock that in nine cases out of ten could be opened with a bent wire. Now, I have sent honey to all parts of the kingdom—in fact, beyond the shores of Old England—labelled "Honey. This side up with care," packed in every instance in cases nailed or screwed down, yet have not lost a single pound, except on one occasion, when I had the temerity to aspire to the "Championship of the World," and sent an exhibit to Castle Douglas, and by some means one out of the three bottles was lost. Again, after appealing in recent numbers of B.J. for bee-keepers to rouse up to the occasion, and make a good show at Islington to give one who has done so the "cut direct," and say you need not show unless you choose. Now for a word with one of my new friends, "Brown." This I am sorry to have to reply to, though duty calls for a reply on my part, after the assertion in No. 2096 (p. 434), that my note was "misleading." *Re* box and basket classes, I have nothing to withdraw, but if space permitted much to add. Now the facts, as impressed on my memory, run thus:—We, *i.e.*, Brown, Woods, and Woodley, tasted my exhibit of honey; Brown says, "What do you think of this (a sample of his honey in a bottle)?" and, after tasting it, I said it was equal to mine that we had just tasted in consistency, but not so good in flavour. But nothing was said of colour, in which my sample was as 5 to 3, if not 5 to 2 in comparison with friend Brown's. Then afterwards friend John Howard came on the scene and we sampled the honey over again, and friend John (who is no mean judge of honey) observed, "Ah, Dick, your honey will stand no chance; it is like mine, tastes too strong of the mustard-pot, but perhaps your packages will help you." This was before the judging. After the judging, and the awards were made we had another confab on the "classes" and "commercial packages," and

as a result I claim that I correctly named them the "box and basket classes." So under the circumstances I felt then, and do feel still, that I was perfectly justified as a chronicler of things *en passant* to *take note* of it, and my humble opinion is that if our judges had had the honey in tins only to adjudicate on, the first prize would have gone to York; and second to Berks, or *vice versâ*, and that the prize-takers now would have been out of it. I may add that my tins contained honey that had never been beaten in competition, so that I knew the contents were first-class.

Now as to commercial packages, I contend that it is the package that contains the commodity and not the case in which the packages travel. Take as an instance Huntley & Palmer's biscuits in tins; *these tins are commercial packages*, and travel the world over, not in wicker baskets or hampers, but in wood cases of different sizes, taking a certain number of tins to suit the customers' requirements—just as our honey should be packed when sold in commercial quantities. Last month's *Gleanings* contains a list of advertisements of honey for sale, 10 tons, 8 tons, 10,000 lbs., a carload,—now what kind of commercial packages do you think these big lumps of honey is offered in; why, principally in 60lb. square tins packed two in a case; this bears out what I said in a previous note, not to put a larger quantity in one case than can be conveniently handled. What would be the result if the 10 ton lot of choice extracted honey was put up in 7, 14, or 28 lb. tins, and each little tin was incased in a neat wicker basket, secured with a nickle-plated padlock? Why, half the value of the honey would be swallowed up in the trappings, and a great increase in the carriage would again detract from the producer's year's balance-sheet. No, my friends, in the future as in the past I shall certainly advocate the cheapest travelling cases, even if it be a "Hudson's soap box" or a "Sunlight soap box." The first for twelve bottles or twelve sections, or 3-14 lb., tall tins of honey cost 2d. or 3d.—the "Sunlight" box holds five dozen sections, with ample room for packing (cost 4d.), the cube sugar box takes six dozen sections and costs 4d. to 6d. Every one of my customers have complimented me on my system of packing, which defies all ordinary railway "jars." The baskets are useful articles for fruit and vegetables, and may act as protectors to a jar of the "Dew off Ben Nevis." But I don't think that we shall ever see any quantity of honey sent in wickered tins; if so, we shall want a tin with a small opening, which can be sealed down, otherwise we shall hear of continual losses in transit of part of the contents, as a pocket-knife or a friendly (?) kick will easily prize off the lid, even when locked, so that the contents can be run out into Mr. "Porter's" honey-pot.—W. WOODLEY, *Beedon, Newbury.*

[We trust that the above very full elucidation of our correspondent's views on the awards at the late Dairy show will render further discussion thereon unnecessary. But, contrary to our usual custom of printing Mr. Woodley's valued "Notes by the Way" without comment of any kind—whether or not we happen to be fully in accord therewith—we cannot help expressing our regret that desultory conversations (or "confabs," as he terms them) should be imported into a discussion of this kind. They seldom do good, and the words "friend Tom," or "friend Harry," happens to let drop in friendly chat, are not always very valuable as evidence. Anyway, we do not think that either Mr. Atkinson or Mr. Woodley have any reason to complain that their respective views have not been fully placed before our readers, and so, as already said, we trust that both gentlemen will now be satisfied to let the matter drop.—EDS.]

QUEEN REARING.

[2104.] Replying to the request of your correspondent "W," in last week's BEE JOURNAL (2099, p. 436), I am happy to do what I can to make plain anything not quite clear in my paper on queen-rearing, but in writing I had of necessity to leave certain minor details, not affecting the main question, to the ingenuity of my readers. Now, in answer to his first query, I would say that, with a standard frame, a movable bottom bar is out of the question, as the space between the bar on which the cells are built and the bottom bar is filled with comb which it would be a great pity to disturb. But, as stated on p. 385, "using as I do the shallow-frame, I prefer an easily removable bottom bar," because with the bottom bar removed the queen cells on the centre bar are much more easily get-at-able and more conveniently manipulated. It is a very simple matter to make the bottom bar removable by means of strips of tin nailed on to the side-bars so as to overlap the bottom bar at each end. The bottom bar would slide in and out, and if made to fit tight would be perfect. I myself use two small screw-eyes, one in each side bar with a slot cut at each end of the bottom bar to fit on to the eyes, and a half turn is all that is necessary to keep the bar in its place. By the time each batch of cells are raised the bees will have built the comb on right and left of the cells down to the bottom bar, and attached the comb to the latter, but after removal of the cells, and when the frame is wanted for use again a warm knife run along the inside of the bottom bar will separate the comb from it, and with a half-turn of the screw-eyes the bar is free. Replying to the second query, as to the contents of the royal cell becoming displaced. If "W." refers to lower part of second column on p. 394 he will find that I say "then with your 'former' slightly enlarge the base of the collar," &c. This enlargement is to overcome the very difficulty he foresees. The collar, when cut off, barely fits over the reduced worker cell (containing the

young grub) from which the surplus wax has been removed, and in removing such surplus wax a little ledge is left round the bottom thereof. The collar is then enlarged to the depth of ⅛ in. *full;* this done, the whole thing fits exactly, and—aided by the slight ledge already mentioned—there is no fear of its being dislodged or slipping, as the bees get to work on the cells, putting them straight, almost as soon as the frame is given them. But in case there is a slight irregularity inside the cell when complete, a "former" inserted in the mouth of the cell (not deep enough to touch the grub, mind), and given a half-turn, will at once set matters right. I have, however, rarely had to do this, because, after a little practice I could tell what was required to a nicety.

With regard to his third and last query—"How are the cells removed when finished and how fixed in the hives?" your correspondent has touched upon one of the great advantages of the methods I am advocating. He must bear in mind that cells built according to the directions given are sound, substantial concerns, and are consequently easily handled compared to those built naturally by the bees. The base of the artificial cells are so solid that they can be removed by running a knife along the face of the bar. Indeed, when not put on too firmly, I have safely removed many by merely pressing the base of the cells in an upward direction when I have not had my knife at hand. As a rule, however, it is much safer to use a knife for the purpose, though nothing short of rough handling or a sudden jerk will damage the cells or hurt the embryo queens in them. When fixing the cells in nucleus hives, take out a centre frame, break down the walls of a few cells with a finger to allow for the mouth of the queen cell to hang free, place the latter with its solid base just above the broken cells, press it *well* into the comb, and return the same to the hive. Or, as an alternative plan, if the weather be warm and the hive fairly strong, uncover the frames, move the two centre ones slightly apart, lower the queen-cell down until just below the top bars, and holding it so, close up the frames together stiffly against the base of the queen-cell and at once cover the hive down. The bees will, in both the above cases, at once set to work to fix the cells securely, and, if good ones, will take proper care of them.

The many letters I have received from bee-keepers in various parts of the country testify to the interest evinced in the subject of queen-rearing, and have been very gratifying to myself; but I think it only right to say that, however interesting this particular branch of bee-culture may be as a study, I do not think there is a more trying or a more disappointing phase of the science of apiculture than queen-rearing. I, therefore, feel it incumbent on me to especially warn beginners against too much impetuosity in trying experiments which may end in disappointment, if not disaster, perhaps losing a whole honey season, and bees into the bargain; in a word, none should start queen-rearing until they have mastered and become thoroughly conversant with the art of practical and scientific bee-keeping in all its branches. Queens may be raised easily enough, but to have batches of from ten to fifty of them lost during the "mating" period in consequence of our uncertain climate, or to have virgin queens occupying hives until too old to mate for the same reason, is a state of affairs tending, I admit, to make even an advanced bee-keeper hesitate before he sacrifices his best stock, and a season to this end. Much, of course, depends upon the natural aptitude of the bee-keeper for this special work, and although I have come across many who are far in advance of myself in the art of honey-getting, yet I find but few who have made a success of queen-rearing. So many things need considering, and so many disadvantages are met with in this country of notoriously uncertain weather, to say nothing of the shortness of our honey season, that I should be failing in candour, after my own experience, if, while pointing out the advantages of having first-class queens, I failed to give a glimpse of the reverse side of the question, and by so doing perhaps save some from entering on a task which might possibly only yield them disappointment and loss.—HENRY W. BRICE, *Thornton Heath, Surrey, November* 2.

THE WILFUL BEE.

[2105.] Referring to your allusion to "The Wilful Bee" in last week's issue, I may inform you that Mr. W. S. Gilbert has kept bees—or rather I have for him—for the last eight years, and he has always shown an interest in them. On one occasion I found the queen for him to see. "Her fort was down and her back was up" is extremely good.—GEO. WALL, (Gardener to W. S. Gilbert, Esq.) *Grim's Dyke, Harrow Weald, November* 5.

[We are very pleased to receive the above communication and to welcome Mr. Gilbert as "one of us."—EDS.]

AWARDS AT THE DAIRY SHOW.

THE GRANULATED HONEY CLASS.

[2106.] I was surprised to see the statement in your issue of the 25th inst., *re* honey at the dairy show, that the commercial class was open to all, when the schedule distinctly states that the honey was to be "Gathered during 1894 by exhibitors' own bees at the time of gathering." Surely the schedule should be strictly adhered to, or else all exhibitors should be advised of any alteration or mistake. I am afraid that unless these rules are adhered to it will greatly injure the success of future shows. I also consider it very unfair to have admitted granulated honey of any year, except that gathered in 1894,

after the very plain statement of the schedule, and if I had had the slightest idea that such was in the prize-list, I should certainly have lodged an objection with the show committee. —E. C. R. WHITE, *Salisbury.*

[Referring to our correspondent's complaint as to the class for "Granulated Honey," the error in schedule was so obvious that it is a wonder any experienced bee-keeper could be misled by it. A class for granulated honey gathered during the current year only would be an absurdity, and one for which there is no need whatever. The idea in establishing this particular class, was to afford an opportunity of staging in competition honey of *any year*, and the older the sample—other points being equal —the greater merit in it.

Since our personal action in this matter has rather unfairly—for obvious reasons—been brought into prominence, we are glad to be able to say—without departing either from the reserve dictated by good taste, or proper official reticence—that, as one of the judges on the occasion referred to, and (speaking for our colleague as well) we should have protested against being called upon to do otherwise than as we did, viz., to take a common-sense view of what was plainly either a printer's or a clerical error, and treat it as such. Nor have we any doubt the majority of the exhibitors did the same.—EDS.]

APIS DORSATA.

[2107.] My experiences with Egyptian swarms led me to look up what references I could concerning this species, but the only account of any value I could find is that contained in the *Record* of June, 1891, pp. 80-81. The illustration there given might have been taken from combs which I saw attached to trees here, but which I was unable to reach, and in knocking them down they became too bruised to be worth keeping as specimens, but I have secured four or five small pieces.

I had noticed that irrespective of the time of day, the direction of the wind, or the ordinary line of flight from the hives, that swarm after swarm clustered on precisely the same spot on certain trees, remained—if beyond my reach, for a few days, and then decamped, leaving two or three small combs attached to the bough. An old guardian told me that the bees do this each year. One specimen of comb I secured has the edges of the cells perfectly round, though the angles are distinct at the base of the cells; the spaces which would naturally occur in a series of circles laid on a plane are filled with wax. In this specimen the queen had laid eight or ten eggs in each cell; the comb is yellow. In another specimen honey and pollen was stored. The only opportunity I had of placing a shade over a cluster was lost owing to a native's stupid interpretation of some regulation concerning the Government garden, in part of which the apiary is situated. Noticing the pioneer bees at work, and a swarm circling, as I was obliged to go to town I asked my wife to go to the spot and as soon as the swarm had clustered either to sprinkle it or arrange a shade over it until my return. On attempting to go to the place her way was barred, and her sister who accompanied her to assist in the operation was seized by the arms and pushed out of the garden. Mr. Mann might have carried his prophetic letter further than he did. On returning home at noon the swarm had taken wing again. I was sorry for this, as I would have been quite ready to sacrifice the swarm and the interesting experiment I was looking forward to, for the pleasure of hiving it and allowing Mr. Ahmed Effendi to wear the skep as a hat for a few minutes.

With one or two swarms beyond my reach, I noticed that the number of bees was less and less each evening. Some may have gone off with one of the many queens which accompany each swarm, or may have returned to the parent hive. The reason why the bees desert the combs I think is easily explained. As building proceeds the cluster naturally spreads, and, as a consequence, the sun's rays can penetrate to the combs. One of the combs I secured just after the swarm had taken wing was quite soft, and from fragments of combs floating in the lake, I surmised that in most instances the heat of the sun and the weight of the bees end in the combs falling, and my opinion as to the bees decamping is, I think, confirmed by each swarm taking wing again about 4 p.m., at which hour the sun's rays were striking the boughs of the trees almost horizontally.

But to return now to the *apis dorsata.* Has it ever been put forward that these bees build on trees in preference to a hive, whether the hive be a made one or a natural hollow in the rocks, an old tree, or similar habitat? The fact of the bees absconding from the observatory hive I do not think should be accepted as evidence of their objection to build in a confined space, as any bees will abscond if over "observed," and in a warm country a glass hive is still more objectionable than it is in a cold country. Then again, knowing as we do the usual flight of the queens, it stands to reason that the bees which annually take possession of the little arbours made by the natives of the Padung-Karen country must come from within a radius of a few miles. Mr. Benton, it appears, made a special journey to Ceylon to secure colonies of these bees, but only succeeded in finding one. My experience here leads me to offer the suggestion that the *apis dorsata* found on the trees are simply swarms from large colonies in the immediate neighbourhood, and doubtless if Mr. Benton had reached Ceylon a few weeks earlier, viz., during the swarming season, he might have secured many colonies, just as in the same way anyone coming to Egypt at the present moment would fail to find on the trees not a trace of the comb-building carried on in the

early part of the year, though if he came anytime between the middle of March and the middle of April it is possible some hundreds of specimens might be secured. One of the specimens I possess was built in an orange tree, and the adjoining leaves had been utilised by the bees to secure the combs.—A. C., *Cairo, October* 26.

BEE-KEEPING IN CO. WEXFORD.

[2108.] In accordance with my annual custom I send you a short report of my bee-keeping for the year in co. Wexford. I commenced the season with eighteen single stocks and two "Wells" hives—which I will count as four colonies—making twenty-two in all. All but one of these were worked for sections as usual, but this year for the first time I tried one for extracted honey, but as it was the weakest of the lot its result is not, of course, to be taken as any test of the comparative value of the two methods. The twenty-one hives yielded 850 completed sections, and 150 all but finished, together with 200 in every stage of filling, these being fed back to the bees. I got about 40 lb. of extracted honey from the weak hive mentioned.

About half a dozen of the stocks were not very strong at the middle of June, but before the year was over vied with the best of them, and all of the hives finished their two racks of sections, some completing three. Roughly speaking, therefore, they may be said to average about fifty sections per hive, while increasing from twenty-two to thirty-eight stocks, after losing two swarms which flew off unseen. All of these are now covered down for winter with plenty of sealed stores to last till the spring of 1895, and strong in bees.

Although the year was extremely wet and cold here, it has been the best season I have had since beginning keeping bees about seven years ago. Yet it was not a good season here, as I drove many skeps about this locality, and they were all very light, and some of them had not stores enough to last till Christmas.—J. D., *Co. Wexford, November* 1.

DRONES FLYING IN NOVEMBER.

[2109.] Perhaps the following may be a word of comfort to some bee-keeper. Like many others, I have always considered it a case of queenlessness to see drones flying at this time of the year, but for the last fortnight I have noticed drones flying from two hives (one my son's, the other my own); still I felt certain all was well, as about a month ago there was plenty of brood. This morning, however (November 5), I noticed several drones appeared at the entrance of the hives. Some took wing, others returned; so, feeling ill at ease, I opened the hive to make sure how matters stood. I did not expect to find eggs, but I found a few workers hatching out; so without looking for the queen—as it was rather cold—I wrapped all up again, feeling sure the queen would be all right. I may say I was feeding till about a month ago. I think that we should "make haste slowly" in introducing queens because we see drones flying in November.—J. Pearman, *Penny-lane, Derby.*

STEALING EXHIBITS.

[2110.] In British Bee Journal, October 25, p. 423, in your list of counties exhibiting honey at the Dairy Show, I notice that Sussex was not represented; I should like to give my reasons for not exhibiting again this year. I exhibited at the Dairy Show in 1891, 1892, and 1893, getting awards on each occasion. But I regret to add part of my exhibits were stolen in returning from the show in 1892, and again in 1893, so that I did not care to risk having them again stolen this year.—Alfred Hounsom, *Bosham, Sussex, November* 3.

HONEY VINEGAR.

In reply to the request of a correspondent ("R. T., Cowbridge, S. Wales") for a recipe for making honey vinegar—and as also being of general interest to readers—we print below full particulars of the *modus operandi* for making an exceptionally good vinegar from honey, which appears in our editorial "Bee Rambles in Savoy," on page 100 of B.J. for February 26, 1891, and reads as under :—

"We also tasted some excellent vinegar, produced in the most simple manner possible, which compared favourably with the best wine vinegar. Every one knows the difficulty nowadays of getting good vinegar, and commercial vinegar usually contains acids that attack the teeth and injure the stomach. As this would be a new way of advantageously utilising honey, we will give the method pursued by M. Morel-Fredel :—Procure a cask, which must be sweet and thoroughly clean. Then get from a vinegar factory, if you cannot get it anywhere else, some of the gelatinous scum which usually contains a ferment called *mycoderma aceti.* Wash this in cold water, and then rinse it in vinegar. Then dissolve honey in water that has been boiled, the proportions being one kilo. of honey to eight to ten litres of water, according to the strength required. When cool pour into the cask and put in the ferment. Care must be taken not to exceed the proportions of honey, as the vinegar would be too sweet, and if a smaller quantity were used it would be too weak. Place the cask in a moderate temperature—60 deg. to 80 deg. Fahr. —and the acetic fermentation is developed rapidly. The bunghole should not be closed tightly—a cloth laid over it or a piece of slate does very well—and the cask should not be more than three parts filled. Air is necessary for proper fermentation. In a very short time the vinegar is ready; in summer one month

suffices. Now the work is practically at an end, for you have only to draw off some of the vinegar and replace it by an equal quantity of honey and water. It is not even necessary to use good honey for this, as the cappings, pieces of broken comb, &c., can have water added to them, and this sweetened water can be used.

"Of course, the strength will vary, but this is of little importance when it is for home consumption. If wanted for sale the proper proportions should be adhered to. It is better to begin making the vinegar in the summer on account of the temperature, and once the fermentation has started you can go on as long as you like. This is a simple recipe, and we hope some of our bee-keepers will make a trial of it."

TECHNICAL INSTRUCTION IN CORNWALL.

A COUNTY COUNCIL EXPERIMENT IN BEE-KEEPING.

One of the most useful purposes to which the technical education grant can be applied is that of the dissemination of knowledge in relation to some of the minor adjuncts of agriculture. Dairy management, fruit culture, poultry rearing, bee-keeping, all demand attention in times when the more important branches of farming are unprofitable, and those who gain a living from the land must needs look for fresh means of increasing their incomes. In this direction the Cornwall County Council are doing most excellent work. Their experiments in fruit culture are calculated to produce valuable results, while a report just received on the first year's working of an experimental apiary, established at Callington, will, no doubt, lead to a development of the much-neglected custom of bee-keeping. The Callington District Technical Education Committee purchased five modern hives, with bees, at a total cost, including carriage of £11. 15s., and subsequently bought another hive for a new swarm of bees, and other necessaries, at a further cost of 19s. 6d. The total expenditure was thus only £12. 14s. 6d., while as the result of the first summer's operations they received £5. 17s. 6d. for honey and sections sold, and added to their stock a swarm of bees valued at 15s. 6d. Bees require so little attention that practically the whole of the receipts are clear profit, and, as the hives are calculated to last twenty years, it may be calculated that the return on the year's experiment is a net gain of about £6. Mr. John Brown, an expert in bee-keeping, was engaged by the committee with the object of demonstrating to the rural population of the district that if conducted on modern principles an apiary may become a steady source of revenue. We gather from his report that the past summer was unfavourable for gathering and storing honey. Each of the hives at Callington, nevertheless, yielded about 30 lb. of honey, and the autumn proved so fine that a further 30 lb. might have been collected without depriving the bees of the store needful for food during a long winter. He has, therefore, succeeded in proving that the neighbourhood of Callington is eminently suited for bee-keeping. The people in the district have, however, hitherto neglected this source of income, while the effect of the little attention paid to the production of honey is that it is seldom seen in the markets of large towns, and is consequently in far less demand than it ought to be upon its merits as an article of diet. We hope the committee will continue in a course which seems likely to lead to good results, and that working men with gardens, as well as fruit-growers and small farmers, may be found profiting by the lessons thus afforded them, and so add both to their home comforts and their financial resources.—*Western Morning News*, Nov. 1.

METEOROLOGICAL SUMMARY.

OCTOBER, 1894.

Locality, Stoke Prior, Worcestershire.
Height above sea-level, 225 ft.
Rainfall, 2·83 in.; heaviest fall, ·70 in. on 26th.
Rain fell on thirteen days.
Max. shade temp., 60° on 7th, 12th, 13th, and 24th.
Min. temp., 24° on 21st.
Max. shade temp. at 9 a.m., 56° on 10th and 11th.
Min. temp. at 9 a.m., 33° on 21st.
Frosty nights, one. 8° of frost on 21st.
Max. barometer, 30·23 on 1st and 2nd.
Min. barometer, 28·89 on 25th.
Wind chiefly from the S. and S.E. Several warm days and for the time of year, very bright, thus causing the bees to be on the wing busily employed in taking in pollen. These broken clusters of course mean a greater consumption of food. PERCY LEIGH.

WEATHER REPORT FOR OCTOBER, 1894.

WESTBOURNE, Sussex.

Rainfall, 6·10 in.	Brightest Day, 2nd, 8 hours.
Heaviest fall, 2·27 in. on 24th.	Sunless Days, 5.
Rain fell on 16 days.	Below average, 24·6 hours.
Above average, 1·91 in.	Mn. Maximum, 54·1°.
Max. Temperature, 63° on 11th.	Mn. Minimum, 43·5°.
Min. Temperature, 31° on 17th.	Mean Temperature, 48·8°.
Minimum on grass, 23° on 17th.	Maximum Barometer, 30·45° on 1st.
Frosty night, 1.	Minimum Barometer, 29·03° on 25th.
Sunshine, 96·4 hours.	

L. B. BIRKETT.

Queries and Replies.

[1197.] *Bees Casting out Drones and Brood.*—1. In taking away combs from my hives for winter, I find upon closer inspection one with comb like the enclosed in centre. Is it chilled or foul brood? 2. At the beginning of August my bees threw out all drones and grubs from the same hive. Was this due to scarcity of food? 3. I have two weak lots of driven bees, three to four frames at most in each hive covered with bees. Would you unite?—NOVICE, *Norwich.*

REPLY.—1. Foul brood. 2. Yes. 3. If the driven bees cover four frames and queens are young, we should be ruled by our needing increase or otherwise. They would winter better in one lot, no doubt, but there are risks in wintering to be taken into account, and, if carefully tended, four frames of bees in November are not so very weak.

[1198.] *Starting Bee-keeping.*—Will you, through the medium of your paper, give me a little help? I wish to start bee-keeping next spring, and I am making a study of the subject in the meantime. 1. Shall I do right in buying a first-class double or single hive with a good stock of Ligurian bees, or shall I get a larger quantity of less costly stuff? My idea of bee-keeping is *profit* with a fair amount of energy and labour, and as little money outlay as is really needed. 2. What is considered to be the distance of bee flight when honey gathering? 3. How can I become a member of the county association?—EDWIN HYLES, *Netteswell, Harlow, Essex.*

REPLY.—1. Get some competent person if possible to advise you as to the selection of a strong healthy stock of what is called the "common" native bee, and avoid as far as you can every appliance but the cheapest and most simple combined with *efficiency* (don't neglect the point emphasised). Time enough to buy foreign bees when you have gained experience with natives, and found them wanting. 2. Bees usually work within a radius of about one and a-half miles from their hives. 3. The hon. sec. of the Essex B.K.A. is Mr. F. H. Meggy, Chelmsford, and the expert is Mr. W. Debnam, Primrose Hill, Chelmsford. Either of the above gentlemen will furnish information as to membership.

[1199.] *Bees short of Food.*—On looking through my Apiary to-day I found the bees of a skep very excited (as I thought) flying about the entrance, but no signs of fighting; the day was rather dull but warm. I am quite a novice, having only started bee-keeping last June, so I got my smoker, puffed it at the entrance and inverted the skep to see if there was any dead bees or honey. I did not see any of the former, and all the cells that I could see were quite empty. I might also mention that the skep in question I purchased this last September. What do you think is the probable cause of all this excitement? and had I better feed them a little. Thanking you in expectation.—B. P., Risley.

REPLY.—The probability is that the bees are very short of food, and are uneasy in consequence. The warmth would cause the cluster of bees to expand and make it a "feed day," *i.e.*, get some food unsealed and moved into the centre of cluster ready for use in cold weather, but when there is no food this kind of movement sometimes results in a "hunger swarm."

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

A. E. TRIMMINGS (Notts).—*Mealiness in Wax.*—The sample sent may be called pure bees' wax so far as not having been intentionally adulterated, but it nevertheless contains a considerable admixture of pollen which will account for the mealiness of texture, or grain, in the wax after melting.

J. D. (Wexford).—*Making Mead in Tins.*—Vessels of tin are not suitable for the purpose of mead making. The liquid should be stored either in wood or earthenware, the former for preference.

ROBERT WELFORD (Ugglebarnby, Yorks).—*Vessels for Candy Making.*—It cannot make any difference whether the pan be of brass or copper in which candy is made. As for syrup-food, by all means make the full quantity needed at one boiling if the pan is large enough, and in any sort of pan. Ours is made in an iron pan holding a couple of dozen pounds of sugar. We note your suggestion as to repeating at regular intervals the most useful recipes for bee-keepers; as a matter of fact, we do repeat many things deemed useful to beginners, rather to the annoyance of some readers at times, we fear.

MR. SAML. STANDRING (Sunny Bank Dewsbury) writes:—I am a beginner in bee-keeping, and should like to become acquainted with other bee-keepers in this district, if there are any. I shall be pleased if I can make this acquaintance through the medium of your journal, or I shall take it as a special favour if any bee-keeper in or near Dewsbury (or Mirfield) will write to me direct. Thanking you in anticipation, &c.

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Editorial, Notices, &c.

USEFUL HINTS.

WEATHER. — We may dismiss the "weather" item of this week's hints by describing it as hereabouts still wet, cold, and generally unfit for the doing of any outside work with either comfort or thoroughness.

DEALING WITH FOUL BROOD. — This *bête noir* of the bee-keeper is again cropping up, as it usually does in autumn, because of being found in unsuspected places at the time of finally overhauling hives preparatory to packing up for winter. We are asked the usual question, "What shall I do to cure it?" To which we are compelled perforce to reply, "At this season, nothing!" Beyond removing all such combs as contain patches of dead brood and burning them at once, nothing can now be done except using preventives —which should never be absent from the hives—on all floorboards, and waiting until the return of spring warmth renews breeding and tests the malignity or otherwise of the attack. Then, and not till then, each case may be dealt with on its merits. Broadly speaking, it may be said that cases of malignant foul brood should not be tampered with at all, but dealt with in three words—*i.e.*, "Burn the lot!" Having said this much, we are just as emphatic in asserting that the enormous number of cases where stocks suffering from more or less mild attacks of the disease have been cured and rendered profitable quite justify the efforts made to that end. It is, however, very certain that something must be done by way of seconding the curative and preventive process by removing what is the main cause of the recurrence of the disease.

A correspondent—the disinterestedness of whose motives we can vouch for —refers on another page to the same subject, and, erroneously, as we think, sees no alternative but doing away with all "so-called remedies," and advocating the prompt destruction of bees and combs on the first outbreak of the disease. This is, of course, natural for any one suffering under repeated disappointments caused by the reappearance of the malady among bees supposed to be cured; but, so long as the very mischief our correspondent so aptly illustrates and warmly condemns—viz., foul-broody hives—exists in our midst, and cannot be destroyed without the consent of their owners, it seems to us a little unfair to try and fix the blame on the "so-called remedies."

Anyway, there is abundant evidence that but for the free use of preventive remedies in hives at the present time, foul brood would be far more prevalent than it now is, and, however desirable it may be to see more drastic remedies advocated, there is the one stumbling-block to overcome which at present debars these suggestions from having any practical value—viz., the consent which is wanting in the case our correspondent refers to on page 455.

A few words addressed to members of the Kent B.K.A.—which appears in the local cover appended to the issue in that county of our monthly, the RECORD—also very aptly illustrates the evil dealt with, and at the same time shows how it is proposed to meet it. It reads as follows:—

> The avarice of some bee-keepers, and the indifference of others, greatly impede the efforts of those who are endeavouring to stamp out the disease. In one centre, where our members have been very successful in the profitable production of honey, the health of forty or fifty stocks is now seriously endangered by the refusal of one bee-keeper (not a member of our association) to destroy a diseased stock, although ample compensation has been offered him.
>
> At the date of going to press, a score of hives at one farm are to be put up to auction, in every one of which the bees have died from foul brood! The honorary local secretary of our association, for the district in which the sale takes place, has arranged to buy the hives, so as to procure proper disinfection, otherwise their distribution would but serve to set up fresh centres of disease in the county. We cannot too strongly, or too frequently, caution our members on the score of this danger that so seriously threatens the prosperity of the bee-keeping industry.

The above two paragraphs very forcibly show what can and what cannot be done in combatting the evil with which we are dealing, and brings home to us what is needed. It is something to know that selfish persons cannot be induced to destroy, in the interest of others, what, in their eyes, possesses even the smallest value to themselves, but when—as in the case quoted — ample compensation is

offered, there seems no motive beyond "pure cussedness" for a refusal, and until the law compels consent we must put up with it. The second paragraph is well worth taking to heart by all county associations where foul brood is prevalent.

PRESERVING SURPLUS QUEENS.—Bee-keepers not well versed in the formation and care of small nuclei for the preservation of surplus queens will read with interest the following description of the method followed by Mrs. Atchley, the well-known American queen-raiser, as carried out by the Editor of the *Bee-Keepers' Review* in his own apiary. Mr. Hutchinson says :—

Queens in large numbers are now being kept in the *Review* apiary by means of the Atchley plan. An old-style Heddon super is divided into eight compartments, three unfinished sections and a caged queen placed in each compartment, and the super placed over a queenless colony. The bees rush up and cluster around the queen and between the sections. Just at dusk the super is placed upon a bottom-board having a raised rim around the outside, also strips across the centre to correspond with the divisions in the case, and carried to a new stand in some shady secluded spot. Each little compartment is furnished with an entrance cut through the rim around the outside of the bottom-board. A piece of queen-excluding metal, with a single opening, is placed in each entrance. Each little hive is furnished with a separate cover, and over all is laid a flat board cover. The next day at dusk the queens are released. I have yet to have a queen killed in one of these little clusters. Robbers give no trouble whatever. It isn't that they do not find the hives, as I often see them "snooping" around them, but they seem to hesitate about crawling through the perforated metal when there is any opposition back of it. This plan keeps the queens in the best possible condition for shipment, and enables me to keep a stock of queens on hand all ready for immediate shipment.

PRICES OF SUGAR.—We are glad to notify a reduction of 1s. per cwt. in the price of cane-sugar from November 1. Apropos of prices and honey sales, a correspondent in the North under date November 7 writes:—"I got this year 50 stone of surplus honey, and so far have only sold about one-half of it. Last year I had half a ton, and sold it all quite easily; but these cursed strikes here in the North ruin all." We wonder how many connected with bees or honey production would ever have supposed that the industry would have been affected by a strike! But it serves to show how far-reaching in its effects is this social strife.

BRITISH BEE-KEEPERS' ASSOCIATION.

The usual monthly committee meeting was held at 105, Jermyn-street, on Thursday, the 8th inst. Present: Mr. T. W. Cowan (in the chair), Rev. G. W. Bancks, Messrs. W. B. Carr, Jesse Garratt, W. O'B. Glennie (treasurer), H. Jonas, J. H. New, E. D. Till, and John Huckle (secretary).

A communication was received from the Hon. and Rev. H. Bligh regretting his inability to be present. After the minutes of the last meeting were read and confirmed, the Finance Committee's report recommending the payment of the association's liabilities in respect to the recent dairy exhibition was adopted.

The Secretary reported that, in accordance with the resolution passed at the last meeting, he had communicated with the several affiliated associations in reference to the formation of centres for conducting third-class examinations. Letters were read—1. From the Notts Association suggesting that the counties of Notts, Derby, and Leicester should be grouped together as one centre, the examination to be held on the second day of the exhibition held in either of these counties. 2. From the Glamorganshire Association intimating that at present the facilities given for these examinations were too small, and that in the event of the proposed centres being formed, the difficulties would be increased.

The Chairman reported that the educational sub-committee had prepared the syllabus, &c., for conducting the examinations for lectureships in apiculture. Resolved—"That the same be approved, and that the chairman be empowered to make the necessary arrangements for printing and circulating the same."

The Exhibitions Sub-Committee presented their report on the Dairy Show, and recommended that at a future show any vagueness in the wording of the schedule should be removed, so as to make its meaning clear and easily understood by both judges and exhibitors.

The prize schedule for honey, &c, for the bee-department of the Royal Agricultural Show, to be held at Darlington in 1895, as recommended by the Exhibitions Sub-Committee, was considered and approved.

On the motion of the Chairman it was resolved—"That the best thanks of the association be given to Mr. Garratt, Mr. Hooker, and Mr. Till for their valuable services in acting as stewards of the bee department at the Dairy Show."

The following new members were elected, viz. :—The Hon. Miss R. Hanbury, Broome Hall, Scole; Mr. Robert Ness, Sproxton Park

Helmsley, Yorks; Mr. John Brown, Polyphant, Launceston.

This completed the business of the meeting, which terminated in the usual way.

IRISH BEE-KEEPERS' ASSOCIATION.

The committee met on 6th instant. The chair was taken by Mr. Gillies, and afterwards by Mr. Read. Present also Dr. Traill, Captain Millner, Mr. O'Bryen, and Mr. Chenevix (hon. sec., of 15, Morehampton-road, Dublin). The subject of most interest related to the possible extension to other parts of Ireland of the system by which in certain localities bee-keeping is promoted with the aid of the Congested Districts Board.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of October, 1894, was £2,273.—*From a return furnished by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C." (see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

QUEEN REARING IN HIVES WITH LAYING QUEENS.

A LINE FROM DR. C. C. MILLER.

[2111.] Mr. Henry W. Brice, in his very interesting series of articles on queen rearing, gives me credit for being first to mention the plan of transferring larvæ into queen cells. I do not deserve such credit, and am sorry to say I cannot now recall the right man, although I think it was a Michigan bee-keeper. I think the only thing of which Mr. Brice makes any use that originated with me is the plan of raising queens in a hive with a laying queen. Small credit do I deserve for that, as it was by mere accident, and possibly Mr. Brice may be interested to know something of the particulars of the first case mentioned in print. I had a number of empty combs to be taken care of, and I piled them up over a fairly strong colony in a ten-frame hive, making four stories in all, so that the colony had forty combs, with free access to all the four stories. Having some fear that the bees might not extend their care to the upper story, I put a frame of brood in it, feeling sure the bees would then care for this upper story, and all the combs between it and the first story. Some time later I noticed a few bees going in and out of a small leak in the upper story, and was surprised to find a laying queen there. This queen having whole wings I knew it could not be the old queen, which was clipped. I left the bees to their own devices, and later in the season found a strong colony in the fourth story as well as one in the first. I raised the fourth story, put a floor board under it, and had two entirely separate colonies, both in fine condition.

On page 406 Mr. Brice mentions sealed queen-cells being left undisturbed in a hive till about ready to hatch, although a laying queen was in the hive. I wonder if his experience in general will not coincide with mine, which leads me to believe that if queen-cells are placed in a hive where the bees do not desire to raise a queen, such queen-cells will be emptied of their contents if not sealed, but if the cells are sealed they are not disturbed until the princesses (I like that word that you Britishers use) are about ready to emerge. But a virgin queen may tear down sealed cells at an earlier stage.

Kindest greetings to my brethren of the mother-country. — C. C. MILLER, *Marengo Illinois, October* 25, 1894.

BEE NOTES FROM SUSSEX.

SOMETHING LIKE FEEDING UP FOR WINTER.

[2112.] It has occurred to me that it might interest some of your readers if I gave a few notes about this year's bee-keeping in my locality (the coast of Sussex between Worthing and Littlehampton), because I am persuaded that bees in such sunny and favoured neighbourhoods as these require somewhat different treatment compared with those more to the North.

I began the spring of 1894 with two well-stocked hives, which had come in first-rate condition through the winter. I lost a splendid swarm in June from the one, through unneighbourly conduct, and I had to divide the other twice to prevent a similar mishap. The one I worked for sections, and had at one time four crates on, making eighty-four 1-lb. sections in all. Nearly all these were more or less built out, but only about twenty-four were fairly filled; most of the others I had to uncap and extract; but I have a fine stock of fully or partially built-out sections with which to start next spring. The extracted honey amounted to some 5 lb. From my other hive I obtained 15 lb. of run honey from one (upper) lift of shallow frames, and might have obtained as much or more from a lower lift, but I became alarmed at the destitute condition of the lower brood-boxes, and gave the whole of this sealed

honey to the bees of my hives. From the two hives I estimate that I obtained about 40lb. of honey, in comb and extracted.

Now the point to which I wish to draw attention is that all this was stored by the bees *before the end of March*. The use of glass panes on the tops of my hives enables me to state positively that after March the bees barely gathered sufficient to feed themselves from day to day. In the middle of September, when I overhauled my then four hives, there was very little or no honey, and no brood whatever, in the brood chambers, and very little honey above—except in the one sealed lift, then still left on one hive. Just at that time I became the possessor of a "Wells" hive, into which I transferred the two best of my stocks; and I then filled up the weakest lot, and also replaced the stocks in the two single hives, with five lots of driven bees from skeps in the village. I do not think there was 1 lb. of honey in all these five skeps put together, and there was no brood; and I fear a vast number of cottager's bees will perish this winter from sheer starvation. I am helping to dispose of them wherever they cannot be fed up well.

Immediately after this I had to be away for five weeks; but I left everything in order, and feeders on; and during my absence and since the little wretches have actually taken down over 250 lb. of sugar made into syrup, or over 40 lb. to each hive, and are as merry as crickets, as they well may be. For with this they have—so far as I can see through my glass tops—built out, filled, and sealed, nearly all the ten lower standard and ten upper shallow frames in each of my six hives (counting the "Wells" as two), only one hive being somewhat backward. They would take, apparently, as much more as I chose to give them; but as they have begun building brace-combs, I think it is high time to cut off supplies at last. Otherwise comb building on such a scale from cheap sugar is profitable work.

It is now November, and so far from settling down for the winter, every sunny hour these bees are dancing in front of the hives, ransacking the ivy blooms, and working hard at comb-making and sealing within the hives. Last spring they were hard at work again before March. I intend on the very first fine day in February to put on excluder zinc and supers, as I am persuaded that even so early, even if they do not store honey, they at any rate build comb. One neighbouring bee-keeper told me he once, by mistake, left an empty crate of sections on one of his hives in the autumn. In February, when he went to make a spring inspection of his hives, the crate was already filled and sealed. Last February my bees employed their leisure in building me no end of brace-combs; and I prefer to give them more remunerative occupation, especially as removing brace-combs full of grubs is unpleasant, although easy enough, work.

On one point I should be very glad of advice. 1. Ought I, in the spring, to leave the bees the lifts of shallow frames above the brood chambers, as so many *dependances* to these latter, in order to obtain stronger stocks and avoid swarming? This was my original idea. If not, how can I *compel* the bees to unstore the sealed syrup, so that I can get the combs refilled with honey? They are mostly splendid combs, and would be invaluable for the extractor; but, of course, no suspicion of syrup must remain about them. I rather grudge their being spoiled by brood. 2. Also, is there any fear of the bees transferring syrup in the spring from below to above the excluder zinc?

So far as I know I have been much more fortunate than my neighbours, who have had positively *no* honey return whatever this summer, and are left with stocks of starving bees.

May I conclude by saying, with respect to the right way of putting on excluder zinc, and as some excuse for myself, that hitherto every sheet which I have bought, and from different and well-known makers, has had the slots arranged *along* the combs and not *across* them; just as also nearly every sheet of foundation I have received has been cut so that the straight sides of the hexagons have been horizontal, and not vertical, as they should be. But I am afraid excluder zinc, however put on, does greatly impede the working of the bees. Thanking you in advance,—I remain, W. R. N., *Sussex, November* 5.

[If the whole ten shallow frames are filled and sealed over, we fancy there will not be very much of the 40 lb. of food in body-box below. In view of the conditions detailed, and considering how near the winter is, we should therefore lift off the shallow-frame box and examine the combs below to make sure as to the amount of food in them. For the rest, we do not think any advantage would result from allowing the shallow frames to be used for brood in addition to the ten standard frames below; because, in a district so early that bees are storing surplus in March, that number of frames would be ample for the queen's requirements. 1. Under the circumstances, our plan would be to get the queen below and set the excluder on now, keeping the shallow-frame box as a surplus chamber for early storing after the bees had used up the contents of the combs for food. The bees might be got to take down the contents of two or three of the shallow combs if they were uncapped at once, and mayhap several more might be emptied in the same way later on; but we should leave some of the centre combs as they now are for the winter. 2. Bees will sometimes carry syrup into supers if cramped for breeding space.—EDS.]

FOUL BROOD.

SOME HELP WANTED.

[2113.] I take a deep interest in the subject of foul brood, for I plainly see that, unless

bee-keepers stir themselves, bee-keeping in my plague-stricken district will soon be not worth attempting. My neighbour owns three diseased and worthless stocks. I offer to amply indemnify him if he will destroy them. He refuses, and tells me "he knows the remedies;" but, Mr. Editor, what is the effect of trusting to these so-called "remedies?"

Granted, for the sake of argument, that it may be possible to eradicate the disease in a queen, so that her offspring may be uninfected or immune, still, we have no guarantee that the rest of the colony is uninfected, how therefore are we to gauge a total absence of infection?

On the other hand, if we destroy bees and combs *in toto* by fire immediately the disease is discovered, we *have* the guarantee (so far as that particular colony is concerned) that we have control of the mischief, for it is comparatively easy to disinfect the hive by dry heat or "current steam" in a sterilising chamber.

I maintain that entire reliance on the other so-called "remedies," places us in a position of false security, inasmuch as whilst applying the "remedies," we continue to preserve a centre of infection and jeopardize our own and our neighbours' stocks. We have not dealt *thoroughly, i.e.*, scientifically, with the outbreak,—the fact is, these remedies are merely palliative, and therefore dangerous! I wish I could be persuaded to the contrary, but I, too, have attempted a cure and seen the disease apparently staying its course, filling me with the strongest hope, but returning spring has brought a recrudescence, and, alas, extension of the plague occasioning in turn the deepest—

DISAPPOINTMENT.

[We entirely agree with our correspondent as to the futility of expecting favourable results in dealing with so infectious a bee-disease as foul brood, so long as the source of infection continues to exist. This is the real and solid ground of complaint, and it seems to us somewhat unjust to cast the onus of failure on what our correspondent terms the "so-called remedies." No doubt a large number of bee-keepers still fail to realise the nature of the disease, and fail to take proper precautions; but, until legal powers are obtained to compel the destruction of diseased hives, badly-infected districts will always be troublesome places in which to keep bees; and in the meantime we think it will only be adding to the evil by either discouraging the use of preventive measures or trying to discredit their usefulness.—EDS.]

APIS DORSATA AND EGYPTIAN BEES.

[2114.] Referring to your correspondent's letter (2107, p. 446) in B.B.J. for November 8, 1894, it seems to me that Mr. "A. C.," of Cairo, mixes up *Apis dorsata* with the *Apis mellifica*. The Egyptian bee is simply a variety of the honey-bee kept in hives—as can be seen in Mr. T. W. Cowan's book on "The Honey-Bee." On page 3 is a table, wherein is stated "Species Mellifica; varieties, English, Cyprian, Italian, Carniolan," &c. In this "et cetera" the Egyptian and its fellow-insect of Palestine is included. It is also often called *Apis fasciata*—on account of the distinct bands—the banded bee.

The late, and much-regretted, Mr. Frank Cheshire says, in vol. ii. of "Scientific and Practical Bee-Keeping (p. 626), "*Apis dorsata* (normally building under boughs, but frequently in caves) is the giant of the genus Apis, the smallest of its workers being quite equal in size to the largest of the queens of any of the European races." Then, on p. 315, same volume, he says, "*Apis dorsata* has been hunted up, although it is known to be a useless savage, simply because it is *big*, and that by the very persons who claim that the smaller hive bees are the best, in that they give their vote generally to the yellow varieties. Fortunately, it is in the very nature of things impracticable to 'hybridise' our hive bees with dorsata, over which we may inscribe 'Requiescat in pace;'" and again, p. 627, same volume, "In many parts it (*Apis dorsata*) migrates regularly at certain seasons, its habit being to leave its comb on failure of pasturage, reminding us of the 'vagabond' swarms of *Apis mellifica*." Then, turning to page 168 of volume ii., "bees sometimes abscond because their stores have run out, and circumstances are desperate. Such have usually been called 'hunger' or 'vagabond' swarms. The method of preventing this annoyance and loss is obvious. After hiving the woe-begone subjects of misfortune or neglect, a comb of store and some unsealed brood should be at once given; then gentle feeding, continued with a generous hand until they have abundance, will restore contentment."

I said Mr. A. C. "mixed up," for he finds that the illustrations given in the *Record* of June, 1891, resemble the pieces of comb he secured. Evidently an illustration does not differ, not even natural comb of *Apis dorsata* and *mellifica* differ so much as to be caught by the unaccustomed eye. Swarms clustered precisely on the same spot of certain trees, is explained simply by the fact that the odour of the past swarm attracted the new-comers. That they decamped was evidence enough that they were "hunger" or "vagabond" swarms that had come with the remainder of honey from their deserted hives and began building comb, but could not continue, as there were no flowers to continue to build and store from. The queen, of course, laid several eggs in one cell, as she had the eggs and not cells enough, thus deposited them anywhere. Egypt and the plain of Sharon in Palestine closely resemble each other in many ways. The hives in Egypt and Palestine (plain) are made of sun-burnt clay; in Egypt also mud of the Nile. Now, where the owner is ignorant of the effects of the sun's rays, and does not cover the hives

the fresh combs often fall down, and the bees abscond. Another reason may be the numerous hornets, or the number of queens in swarming season, making many and small swarms which cluster on trees, and are either too weak to resist the enemy or have not stores enough to follow up the building of comb in the tree. *Apis dorsata* always builds one huge comb below the bough of a tree or beneath rock-cliffs—as the Bambera-galla in Ceylon, visited by Benton in 1880. This bee-rock, as the name denotes in Singalese, had about a dozen colonies, and Benton brought four colonies with him, not "one." Mr. Benton is enough of a bee-expert to have known a good many items pointed out by your correspondent, and has seen colonies not merely on small pieces of comb, but on huge combs measuring near 3 ft. in length. Mr. R. Dathe, of Eystrup, Hanover, also visited Ceylon in 1882-83, and brought several colonies with him. These colonies I have seen and observed for nearly a year in the orange gardens of Jaffa, but they would not build a single cell in the hive. The hive was open—so as to imitate the bees' natural preference to work in the open-air—protected by two sides only, and against the direct rays of the sun. A good deal of money was spent by Mr. Dathe, and an expert German bee-keeper did all in his power to try to acclimatise them; but finally they died, without leaving eggs or any comb. Again, the Rev. A. Bunker, of Rangoon, Burmah, wrote a series of articles in *Gleanings*, in which it could be seen that those bees were simply migratory; for, although he had a kind of shed built, and sufficient protection against the wind and rain—by which it was supposed that the bees had been driven away—but it was found out simply that they could not be kept back from these journeys, just as little as swallows or storks may be kept back from flying to southern climes when winter approaches.

The Egyptian bee (*Apis mellifica*) is a domestic bee, and if kept in any hive, (1) well protected against the fearful rays of the sun (or hornet attacks, for that matter); (2) a good strong population breeder by a good prolific mother.; (3) plenty of stores,—no "over-observation" will make them abscond, except it be over-meddling, allowing robbers to get through cracks or bad shutters. Ventilation, of course, is very necessary; but any bee-keeper of a few years' experience, and caring for his bees, will have found out after a few days what is good or bad for them. I have seen some fine apiaries in the neighbourhood of Cairo—kept by an expert bee-keeper, of course—in Egyptian Nile-mud hives. At Menshret el-Bakara a man owning something near 600 hives on one spot could easily tell how to prevent so many swarms issuing. No trees being in the neighbourhood, he easily secures his swarms, whilst some more neglected apiaries at Rom el-Aswad, Saft-Saban, Nahra el-Metemr were perhaps the real sources of those hundreds of "vagabond swarms," or for that matter real swarms, gone to cluster on trees; but certainly never more than perhaps 1 per cent. would stay on such orange boughs.

In Jaffa, Palestine, I've found such swarms which did build two or three small combs, but would not resist the heat coming later on. On one occasion a swarm had even partly succeeded in drawing quite a protection of propolis over itself, but those tree swarms never last long, whilst the swarms going to clefts in the mountain rocks keep for many years, perhaps for centuries, undisturbed. Quite near Nice is a big rock, where an old man of seventy only the other day told me he always remembers the bees to have been there. *Apis mellifica* does not migrate when properly hived, be it in Egypt, Cyprus, Palestine, France, or England, but *Apis dorsata* will.—PH. J. BALDENSPEGER, *Nice, Mt. Gros, October* 11, 1894.

BEES IN COUNTY KILKENNY.

VAGRANT AND OTHER SWARMS.

[2115.] A vagrant swarm came and settled in a cottager's garden in our village early in May; it swarmed again in June, and a second swarm, or cast, issued some days afterwards. These people are not bee-keepers, so the cast died of starvation in August, and I predict the same fate for the remaining two, as they will not feed.

Early in May another stray swarm came over this village, and took possession of an empty frame-hive in a gentleman's garden here, from which the cast had died out through foul brood some two years previously. I was applied to, to know what could be done as the hive was foul-broody. I told the gentleman to procure another hive, and I would transfer the bees for him. The swarm, however, was on these disused combs two days before a hive could be got, and even then, it was only a skep. I note the query often repeated in the pages of the B. J., "How shall I transfer my bees located in a skep to a frame-hive?" but here was a case of transferring from a frame-hive to a skep. The frame-hive was, if I may use the expression, boiling over with bees, so large was the swarm. The bees were shaken off, frame by frame, and allowed to run into the skep; but while operating, I noticed that bees were going into another empty frame-hive through a chink in the roof, the entrance being closed. On examination of this latter hive, I found that four frames were covered with bees; search was made for a queen, but I could not find one, so I shook this lot in with the others and I believe they belonged to them but could not find room in the hive. Short as was the time the bees were on the frames, they had almost filled every cell with newly-gathered honey. It was a hard job, but I had the satisfaction of knowing that I was breaking up a colony about to establish themselves in a foul-broody hive within easy reach of my own apiary. This

swarm did well; it gave two swarms and some surplus honey to its owner.

On August 22 I got word of a swarm being in a hedge about three miles from here, but being so late in the season I had doubts as to the truth of the story and thought it might be a wasp's nest; however, after some consideration, I decided to go and see for myself.

On my arrival the farmer pointed out the bees. They were located in the open at the bole of a whitethorn bush about 18 in. from the ground facing the south. There were four combs 10 in. long and 4 in. wide, built and attached by their sides to the bole of the tree, and immediately underneath on the ground was another comb of the same dimensions, where it had fallen some time previously. I cut off the combs and shook the bees into my skep, and fixed it up where their combs had been, and in a very short time I had all the bees secured in the skep and the combs safely wrapped up in a newspaper. There were some stores in the combs, but no brood, though the centre ones showed signs of having been bred in. I was told it was a fine swarm at first, but now it was very small, not being able to cover more than the centre of the combs, the top and bottom portion being quite exposed to the weather. It was there, the farmer told me, since about June 26, and he would have sent me word at the time only some person told him that I was sick, which was the fact.

The little lot fell in handy, for some days previous I discovered that one of my stocks was queenless; the strangers were united to the queenless stock next day, and were received by them all right, and are now doing well, having brood in four frames.

It is very seldom that bees in this country settle down to their work and build combs such as these in the open air. I never saw a case like it before. It was pretty to look at before anything was disturbed, and it made me wish that I could have got a photograph of the whole thing as it stood when I arrived at the place.—M. K., *Piltown, co. Kilkenny, November* 5.

Queries and Replies.

[1200.] *Dealing with Condemned Skeps.*—I got three condemned stocks in straw hives this autumn from parties who did not expect them to pull through the winter. I have fed them, and two have increased wonderfully in weight and numbers, the third has stored up a lot of syrup, but, while the other two have availed themselves of every fine hour to gather pollen, and even these last few days of bad weather have brought in heavier loads of pollen from the ivy than on the fine days in August, the third has only carried in very small amounts. I close the entrances to each of the skeps every night with perforated zinc, and do not open till the bees are astir in the morning as wasps are a nuisance here, and get into the hives long before the bees are busy. On taking away the zinc from No. 3, no matter how early, some of the bees are waiting to carry out larvæ in different stages, but never more than three or four the same morning. From what little knowledge I have got from "Cowan's Guide" and "Modern Bee-Keeping," I suspect the queen is there, but must be very old, or else the bees would be more active. They keep guard and defend their hive right enough, but do not look for either honey or pollen like the other two. Please say if you think they will be any use in spring? I am trying to find out the simplest and best hive to invest in; one that can be easily carried, as there are different districts here that at different seasons are literally "overflowing with milk and honey."—VOLTIGEUR, *Knocknagun, November* 7.

REPLY.—It is evident that from some cause breeding has been going on much more slowly in No. 3, but it is difficult to say, for certain, how it may be in spring, so you will have to wait and watch. The closing up of entrances at night should stop when wasps cease to give trouble, as they will very shortly.

[1201.] *Uniting Bees in "Wells" Hives.*—Owing to my being busy I have not been able to attend to my bees for the last few weeks. Upon looking at them to-day I find one stock in a "Wells" hive gone, the combs being nearly filled with brood; and in my other two "Wells" hives I find a weak lot in one compartment of each hive. I have also two fairly strong stocks in single hives. 1. I want to know if it is too late to unite, and, if not, shall I put the weak stock on the other side of the "Wells" hive with the strong stock, or unite the two weak ones? On one side of one of my "Wells" hives I put a skep in which was a strong stock of bees, bought in the spring. I put the skep above the frames, and the bees have worked down on to them. Now I want to remove the skep, but the bees in it are strong, with, I believe, plenty of honey. 2. What shall I do? Leave them till the spring, or if I remove the skep what is the best way to do it?—F. R. S., *Cornwall, November* 6.

REPLY.—1. If you are quite sure the weak stocks are healthy it will be advantageous to winter each along with the strong lot in the "Wells" hive. 2. The skep had best be left where it is till spring. Are you sure the brood left in the deserted compartment of one "Wells" hive is not foul?

[1202.] *Section-racks and Bee-ways.*—I have kept bees for four years, and read your helpful journal all that time, but I am still (and always shall be, I suppose), wanting information about bees—though not how to make *artificial* honey or other fraud. I should like your opinion as to the following:—In placing a rack of sections

on (*i.e.*, touching the bars) a frame hive, how should the "bee-ways" be placed with reference to the top bars of frames?—in the same line or across? Of course, it is a matter of the bars running parallel to or at right angles to the entrance, and then if the rack covers the bars, nine or ten as the case may be. It is a question only of more or less room for the bees to ascend to the rack above. I have over forty hives, and am surrounded by heather, which always seems to yield honey if the may, apple, and holly blossom do not, from rain. Referring to last par. in your "Review of Continental Bee Papers," on page 440, I wonder the Bavarian "Society of Applied Chemistry" do not analyse soup made from "well-dubbed old shooting-boots," which, with "a pinch of salt," I am told, can hardly be distinguished from many forms of soup!—J. W. HEATHCOTE (Major), *New Forest, November* 6.

REPLY.—Section racks are usually placed on hives so that the bee-ways above frames run across the top bars. The actual sections, therefore, are parallel to the frames in the hives below. It cannot, however, make very much difference which way they run, as there is plenty of passage-way for the ascending bees either way.

[1203.] *Overhauling Hives in Autumn.*—1. Adverting to reply to my query 1197 (p. 449) I should be glad of your advice as to whether it would be wise to overhaul my seven hives now to ascertain whether there is any further trace of foul brood than the piece sent. It is beginning to be very cold, and I have packed up for the winter. 2. I sent my hives some two miles away to the heather last August, to a man who keeps bees in skeps. Would it be more likely that the disease was caught from his bees than that it arose from dead grubs, owing to want of food referred to in my last inquiry on p. 449?—NOVICE, *Marsham, Norwich.*

REPLY.—1. We do not see that any good could result from overhauling the hives so late in the season, except perhaps to remove combs containing patches of dead brood, if such were found. Curative measures must be deferred until warm weather in spring. 2. Except noting the fact that foul brood is most infectious, and that weak stocks in skeps are liable to be plundered by strong ones in autumn, we cannot go any further in attributing the mischief to the skeps referred to. It would hardly be fair or just to their owner to do so.

[1204.] *Using Poisonous Substances about Hives.*—Could you inform me through the medium of your paper whether the use of the substance known as "weedkiller" could do any damage to the bees? As I have hardly the time to cope with the great growth of weeds in my apiary, I intend to try the "weedkiller"—a poisonous substance which you mix with water and pour on to the ground. It is, I believe, very efficacious in stopping the growth of weeds. Is it possible, do you think, that it could do any damage to the bees in the hives? I do not think myself that it could affect them.—AMBROSE A. OGLE, *Laleham, November* 7.

REPLY.—We should certainly not use the liquid named about hives, unless during such hours as would give it time to sink quite into the ground while the bees were indoors. It is so poisonous as to kill the very worms in the ground, we believe, and so could hardly fail to be dangerous to bees.

[1205] *Drones in November.*—I shall be glad to have your opinion on the following:—After bringing my hives home from the heather, where they have done exceedingly well, I was afraid the queen in one hive was rather old, and so determined to supersede her by introducing a young one, and at the same time strengthen the stock by adding the bees I got with the young queen. I, therefore, appropriated the contents of the hive, killed the old queen, and mixed the two lots of bees successfully, and the hive was supplied with new frames fitted with foundation, and was fed up. The weather since has been very mild, and I observed in a short time that breeding was going on, and young brood appearing. So late as last Saturday the bees were carrying pollen and getting honey, the latter no doubt stolen, but the former must, I think, be from chrysanthemums and other late flowers, and also from the plants in the numerous greenhouses in the neighbourhood. This afternoon, however, drones have appeared, and although the workers are expelling them, I hardly thought they would have made their appearance at this time, seeing they had new comb to begin with, and altogether I don't like it, being, as I think, unnatural; or, perhaps, something is wrong with the new queen?—A. A. K., *Uddingston, November* 10.

REPLY.—We should lose no time in examining the combs in order to see if the drones are being reared in worker cells. It is so entirely unnatural for stocks in normal condition to breed drones at this season that something must be wrong, and only an investigation of the hive interior will reveal the cause of the mischief. Write us again after examining the combs if you need help.

[1206.] *New Honey Plant.*—Referring to your article in B.B.J. of November 1 (p. 439), on the "New Honey Plant," *Polygonum Sachaliense*, I should feel greatly obliged if you can inform me as to where I can procure the same, in seeds or plants.—J. P. W., *Uttoxeter.*

REPLY.—We think the required information may be had by applying to Mr. Thomas Ware, nurseryman, Tottenham, London, N., but any nursery or seedsman would, no doubt, be able to supply plants or seeds.

THE VALUE OF THE HONEY-BEE.

Were the honey-bee blotted out of the book of Nature, few people realise the loss to agriculture, horticulture, and floriculture that would result. These kindred industries are slow to acknowledge the benefits derived from the bees, as an important aid to complete fertilisation in many plants, as positively necessary to others, and beneficial to all flowers visited by them. Cross fertilisation is Nature's method of progress. The bees are Nature's assistants in this work. No other agency can be substituted. Instead of hostility, the bee-keeper should receive the thanks of the agriculturist and fruit-grower, and the fostering protection of the Government. Its entomological experts should not only spread abroad knowledge regarding insects injurious to vegetation, but also correct information as to those which are helpful to the farmer.

THE QUEEN BEE'S COURT.

The Queen Bee sat on her throne of flowers,
'Mid the clustering buds of the summer bowers.
The lilac, with purple blossoms dight,
Twined with the jasmine's spotless white,
And formed a lovely arch, outspread
In wavy circlets o'er her head.
And she sat on a seat of violets blue,
The primrose at her footstool grew,
And butterflies gaudy, with murmuring sound,
Flew hither and thither, and all around.

And this is the Queen Bee's gala day ;
Her subjects are about to bring,
From the mountain wild, and the valley gay,
Some sweet unsullied offering.
And, lo ! they come in wavering flight,
Glancing like gems in the bright sunlight.

The Mountain Bee.

I've been to the hill
Where the wild thymes grow,
And the heather peeps
From its shroud of snow :
I've rifled each petal, and, lo ! I fling
At thy honoured feet my offering.

The Bee of the Valley.

With buzzing wing
I've been to the vale,
Where its own sweet lily
Loads the gale
With sweetest fragrance, and now I fling
At thy honoured feet my offering.

The Bee of the Brook.

I've been to the brook,
In the dale so lone,
Where it bubbles and kisses
The mossy stone :
I've plundered the violet, and now I fling
At thy honoured feet my offering.

The Garden Bee.

The moss-rose I've kissed
In its graceful vest :
I've slumbered in sweets
On the lilac's breast ;
And, laden with incense, I joyous bring
To thy honoured feet my offering.

The Meadow Bee.

I've flaunted it gay
Mid the scented clover ;
O'er the primrose starred
Have delighted to hover ;
And, with dew all encircled, I heavily bring
To thy honoured feet my offering.

The Bee of the Glen.

I've been to the glen,
Where the sweet eglantine
Round the clustering hawthorn
Its fond arms entwine ;
And their mingled essence now I bring,
At thy fair honoured feet to fling.

And the Queen Bee rose from her fragrant seat,
And lead the ball in measures neat,
And deftly danced a merry round ;
And hither and thither, and in and out,
Her subjects career in the mazy rout,
Their wings emitting a musical sound.
And they danced and twined till the soft sunlight,
Quivering, sunk on the breast of night ;
And then each gossamer winglet closes,
And some seek sweet rest 'mid the spangled roses ;
And others seek the lily's bell,
Or the lowly violet's couch of blue,
Or clustering hawthorns in the dell,
Or wild thyme gemmed with fragrant dew ;
And they sweetly slept, without care or sorrow,
And repeated their pranks on the happy to-morrow.

Workman's Messenger.

BEE-KEEPING AS A BUSINESS.

I am asked whether it pays to make a business of keeping bees, and I find it difficult to answer such a question in as short a way as it is stated, for a great many circumstances can have an influence on the results. Among these influences I may mention the ability of the bee-keeper to understand his business, and to give to his bees the necessary attention at the right time ; the location in which the hives will be placed ; the kind of hives to be used, &c. A great many persons imagine that to keep bees successfully it is but necessary to locate them on a quiet spot, to watch them during the swarming season, and to take the surplus of their harvest. Such was, indeed, the only conditions required before the invention of the movable frame-hive—an invention which afforded to the bee-keepers the means of studying more carefully the habits of bees, to obtain larger crops with less risks of losing them in winter.

From the above it follows that a man who does not know the business of keeping bees ought to begin cautiously with but a few colonies—say two or three—and study the habits of bees in books first ; then, in verifying the teachings of the books, by opening the hives and examining the combs, and by watching outside, the going in and out of the

bees. Such a study will take at least one year. Then if the apprentice bee-keeper finds some pleasure in the work, he can buy a few more colonies, and increase their number either by natural or artificial swarming, or by buying bees. But I advise him to go slowly.

The locality in which the bees are kept has also a large influence on the honey crop, yet it is but a question of larger or smaller profits; for an apiary surrounded with lindens, white clover, or alfalfa, and bordered with cotton lands covered with marshy flowers, has better chance to succeed than any other; but a skilled bee-keeper can have some success, even in a poor location.

Another stumbling-block in bee-keeping is the kind of hive to use. Above all, advise a beginner not to buy patented hives, for most of these vendors of patent hives do not know the habits of bees, and sell inventions more injurious than useful.

As beginners are inclined to risk as little as possible, I think that I have to warn them against the use of small hives, which require more work, more feeding of bees for winter and spring, and do not give as good results as larger ones. To my mind a ten-frame Langstroth hive is not even large enough. We prefer hives containing ten or eleven Quinby frames. These frames are larger and longer than the Langstroth, and although white clover is our only resource, our crop can compete for quantity with those of bee-keepers using small hives located in more prosperous districts.

The conditions of success in bee-keeping, after the selection of the hive, can be summed up in a few words: To know what to do, and to do it in time.—CHAS. DADANT, in *Prairie Farmer.*

SEASONABLE QUESTIONS.

ANSWERED BY G. M. DOOLITTLE.

Rearing Queens.

Question.—I have decided that every colony that is intended to be run for comb-honey next year must contain a queen of this year's rearing. I desire good queens, that my stock may not deteriorate. In view of the foregoing, what plan can I follow in order to produce the best results for a series of years?

Answer.—I cannot conceive what line of argument could have been used to bring the questioner to a decision that he would not allow a queen over a year old in his apiary, which was to be run for comb-honey, and cannot help thinking that, when his experience accumulates, he will find that his decision is not well founded—for queens which are in their second year do fully as good work as younger ones, where the colony is worked for comb-honey, and often are equally good the third and fourth year. Besides, I find, as a rule, that the bees will supersede their own queens as soon as they begin to fail to any appreciable extent; and when the bees undertake this work it is done much more satisfactorily, all things considered, than it is when the apiarist attempts to say, "This shall be," or, "This shall not be."

But if you think you must have your own way, then there is probably no better plan than to follow Willie Atchley's way, as has been given in *Gleanings* during the past year or two. If you think this too much bother, or consider it "fussy," as some claim, then you can rear pretty good queens in this way—Kill the old queen and let each colony rear one from her brood. In five days from the time you killed the old queen, open the hives and look for queen-cells. In doing this it is well to shake the bees off the combs so that the cells can be easily discovered. If any are found capped at this time they should be destroyed, as they will contain larvæ that are too old to make good queens. Bees do not cap over a cell containing a good queen larva, as a rule, in less than six days from the time the mother-queen is removed. The reason for this lies in the fact that bees rarely miss their queen to a sufficient extent to start cells in less than two and a half days after her removal; and if you find cells sealed over on the fifth day after the removal of the old (or mother) queen, you may know that the larva in said capped cell must have been three and a half days old when the bees undertook to change it to a queen. All queen-rearers agree that larvæ two days old and under give the best queens, and that a larva older than three days should never be used under any circumstances, if we would have queens which can be to any extent called good. Of course, the colony is to be well fed, if no honey is coming in from the field, until the sixth day, or till the cells are capped over. *Gleanings.*

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

J. MORRISON (Acton, W.).—*Lantern Slides.*—The address of Messrs. York & Son is 67, Lancaster-road, Notting-hill, W.

R. BAYLEY (Godalming).—*Hives as Incubators.*—Thanks for sketch of frame for use as above. The publication of particulars would, however, be of such increased value after practical trial of the contrivance has been made that we suggest the advisability of this course before printing our correspondent's letter.

H. CALLAWAY (Sheerness).—*Comb Foundation.*—In dealing wholesale, comb foundation is invariably sold by weight. Some retail it at so many sheets to count as 1 lb., but the usual way is to sell by weight.

READER (Glanmire, Cork).—*Removing Propolis.*—Either paraffin or spirits of wine will dissolve propolis.

G. MURRALL.—A good recipe for mead appears in BEE JOURNAL for April 23, 1891. It can be had from this office for 1½d., post free.

Editorial, Notices, &c.

TEACHING BEE-KEEPING.

There is much suggestive matter for thought in the letter of our correspondent "Amateur Expert" on p. 462 of this issue. We do not now for the first time urge the desirability of including bee-keeping as a subject for instruction in our public schools; indeed, it has for a long time past been to our mind a matter of the first importance that no occasion should be missed—when opportunity offered—for bringing to public notice the advantage to be gained in the direction indicated above.

In this country we are notoriously behind our Continental neighbours in matters of national education, but a few years will, no doubt, suffice to see this reproach removed. Free instruction in schools for children and technical education brought free to the doors of adults by means of County Council grants will, we trust, ere long have so impressed itself upon the minds and so expanded the intelligence of the hitherto-neglected humbler classes of the people that we need not fear comparison with our neighbours in years to come.

So long ago as May, 1891, it was pointed out at a meeting of the British Bee-Keepers' Association—held for the purpose of considering the question of technical education, and reported on p. 225 of the *B.J.* for that year—that "every schoolmaster in Germany understood the theory and, to some extent, the practice of bee-keeping, and was obliged to qualify to teach it." In Switzerland, too, the science of bee-keeping is taught by lecturers appointed and paid by the Governments of the several Cantons. Moreover—to quote from another page of the same report—we read :—

> In German Switzerland there was a very complete system in existence. They had not only elementary technical education in bee-keeping, but an advanced course for the instruction of teachers. The course this year lasted from four to six days, theoretical work being done in the morning and practical work in the afternoon. In that instance students had the advantage of being on the spot where there was a very large apiary of some 300 hives, owned by a gentleman who always placed it at the disposal of the professors. Pupils came from all parts of German-speaking Switzerland, bearing their own expenses of travelling and lodging. Instruction was entirely free, the cost being defrayed by subsidies from the Government and the agricultural societies.

To bring the application home to ourselves, the fact that from an audience of juveniles no less than 80 papers on bee-keeping—a subject often regarded by outsiders as dry and uninteresting—should be written by children in response to the request of our correspondent, is, in itself, an encouraging assurance of the results which may be looked for when the subject is intelligently put before the young folks. It should also lend weight to any effort that may be made to secure the advantages referred to in our opening remarks. There is, we regret to say, not much comfort in remembering at the present time that apiculture is already recognised by the Education Department of the country as a subject for teaching in elementary schools, because nothing further than mere official recognition has yet been conceded, and, so far as conferring any advantage on bee-keeping as a pursuit, or extending the benefits to be got from any teaching that might be imparted, the concession may be regarded as a dead letter. Many things, political and social, however, now combine to make the occasion opportune for hoping that something beyond mere tolerance on the part of "the powers that be" will be granted for any present effort that may be made to get bee-keeping recognised as a minor industry worthy of cultivation and encouragement.

The time has gone by when we can afford to pick and choose in matters concerning the wage-earning sources of the masses, and it is obvious that advantage must be taken of every opportunity for adding to the ordinary means of subsistence. This is especially true of agriculture and its allied industries, the profits from which, in so large a measure, seem to be slipping away from our hands into those of "the foreigner." John Bull—as represented by the British agriculturist—they say takes a lot of rousing, and with the rude shaking-up he has of late experienced there need be little doubt that he will not fail in rising to the occasion. He would be, indeed, heavy-headed if he failed to note that something must be done outside the line

in which he has hitherto been working, and that every extra penny that can be got out of the land must be striven for. If grain-growing is no longer profitable, something must be found to take its place; moreover, nothing must be "looked down upon" as too small for notice. This is where the thrifty peasant-farmer of the Continent steps in front of us and prospers where others less frugal would fail. Do not let us forget the truism, "he who can make two blades of grass grow where only one grew before, benefits his kind." Small industries can no longer be ignored—as the proverb has it, "Every mickle mak's a muckle"—and we bee-keepers shall not have to wait long ere our particular "blade of grass" will be cultivated with much more kindliness than it has been in the past or we are much mistaken.

In a word, public opinion is making itself felt in these matters, and it needs but judicious guiding for full value to follow. From our standpoint, therefore, we are on the move forward, and the chief matter for regret lies in the fact that so much of the work at present depends on private and individual effort. Something is being done for bee-keeping out of the public funds, and we are proportionately thankful. But more is needed; not much, it will be admitted, when we say that the ground of our "wants" would be covered by (1) the Minister of Agriculture consenting to include foul brood among bees in the Contagious Diseases (Animals) Act, and (2) the including of bee-keeping among the "extra subjects" for teaching in public schools by the Minister of Education. Not a big programme, but, we venture to say, one which would be of much service to the community at large.

BRISTOL AND SOMERSET B.K.A.

Mr. A. E. Martin, of Bath, and hon. secretary of this association for this district, gave a lecture on apiculture in the Jubilee Hall, Norton St. Philip, on Thursday evening, November 8, to a large and appreciative audience, which was presided over by the vicar, the Rev. E. B. Prince, M.A. The lecturer gave an interesting account of the bees, explaining in his introduction their classification in nature, the subdivision into classes, &c., in which the *apis mellifica* is found; the many kinds of bees, their different modes of treatment, and those best suited to our climate, so that a delightful study might be made a positive success by those villagers who are willing to devote proper time and attention to it. The illustrations were of photographic lantern slides, which enabled the lecturer to show every part of the bee, and explain the different uses for the consummation of its principal object in the production of honey and wax. Several slides showed the apiaries of the old school who will not give up their ideas, although they may get but little honey and subject their bees to the sulphur pit. The illustration of a modern apiary was shown in striking contrast, and a full description of the use of the different articles concluded an interesting and instructive lecture. The vicar, in proposing a vote of thanks to the lecturer, gave a vivid description of his experiences amongst bees, more especially those of South Africa, and the singing of the National Anthem concluded a pleasant and profitable evening.—*Bath Chronicle.*

Correspondence.

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*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C." (see 1st page of advertisements).*

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BEES AND BEE-KEEPING.

AN AFTERNOON AMONG THE SCHOOL-CHILDREN.

[2116.] I have a friend who is the Principal of a large elementary day-school in the West Central division of London. Last summer he accepted my offer to speak one afternoon to his children in the IV., V., VI., and VII. Standards on bees; consequently I gave them about twenty-five minutes' talk in the class-room, and afterwards showed them some live bees in the quadrangle. I prepared the bees for the occasion by placing four crowded frames in a travelling hive early on the morning of the same day. These I placed at the bottom of my garden for about four hours, and gave them a free flight; consequently all the adult bees returned to their original hive, leaving me only the young workers, about a dozen drones, and the queen, none of which were disposed to sting. I thus had the pleasure of passing around the frames amongst the children and their teachers with little fear for them from stings. The novelty

of the sight to 400 young "cockneys," only seven of whom had previously seen a living honey-bee, I must leave to your imagination.

At the close I offered some prizes in honey for the best papers sent to me about "Bees." Eighty-four papers were the result, and the enclosed is what I consider to be the best of the whole bundle. It is the more praiseworthy because through some infirmity the small writer can only use a pen with the left hand.

Perhaps you may think it of sufficient interest to print, even if you cannot reproduce the neat pen-and-ink sketches with which it is embellished.—(Erstwhile) AMATEUR EXPERT, *November* 12, 1894.

ESSAY ON BEES.

By M. Schröder, Standard VI., June 27.

Bees are of the most wonderful insects in nature. There are a good many kinds of bees, but it is of the honey bees I am writing. A hive contains about 50,000 inhabitants, of which one is the queen, who is larger than the rest, and holds authority over the hive. She is the only true female, and lays eggs, from which are produced not only other queens, but also working bees and drones, of which there are about 200 in a hive.

The bee's head, which is a flattened triangle in shape, is joined to the chest by a thin ligament; the chest, or thorax, is of a round form, the abdomen divided into six scaly rings, which shorten the body by slipping over one another to a certain extent; in the front part of the head are two eyes; there are two horns which are very slender, they spring from between the eyes—the use of the horns is to enable the bee to feel and grasp anything in its way. The mouth is a wonderful structure, and the tongue also. The wings consist of two pairs of unequal size, which they can fold up when wanting to go into the cells. The bee has three pairs of legs, those in front being the shortest, and the back the longest; the legs are covered over with hairs, with which they clean themselves, and also the queen, whenever she needs their attention.

The queen-bee is of a larger size than either the drone or worker; she has an elongated body, colour being black above and tinted with yellow; she has only four thousand pupils to her eyes, whilst the working-bee has six thousand and the drone nine thousand. The Germans call the queen the mother-bee. She commences to lay eggs in the early spring, and continues to do so until the end of September, laying in the warmest season about two hundred eggs a day.

The drones are next in size to the queen; they are the male bees, and are so called from the loud noise which they make with their wings. The workers sting them to death before the winter comes on because the workers have as much as they can do to provide for the coming young ones and their own winter food.

The neuters, or workers, whose duty it is to collect the sweet juices which are found in the flower-cup are also the nurses of the hive. The matter which is sucked up from the flowers is deposited in a little bag called the honey-sac. In one kind of working bee it assumes a waxen consistency, and in another it becomes honey. They also collect with their bristly feet the pollen, which is also taken home, and afterwards mixed with honey for food for young in the larvæ state.

The wax is built into ranges of little cells for the reception and safe keeping of the honey. Bees never go to two different kinds of flowers without first going to the hive to empty the honey-bag into one of the cells, closing the mouth of the cell with wax when it is full; these cells are arranged in clusters or combs, and each comb hangs like a thick curtain from the top and sides of the hive. Besides being the receptacle for honey they are also used to contain the eggs of the queen, who carefully examines each cell before depositing the egg. After three days the egg bursts, and a small, lively worm is seen, which the nurses take care of and feed until it fills the cell, which is then sealed with wax. Left to itself, the larva begins the process of spinning a cocoon round its body, which it does in thirty-six hours, the material being a fine silken thread. In three days it becomes a chrysalis, and on the twenty-first day from the deposition of the egg the young bee, which has now progressed to a perfect state, bursts through its prison door and soon makes its escape.

The egg which is to become a queen is deposited in a larger cell; the nurses watch it incessantly, and feed it with a rich jelly. In five days the cell is sealed up; the cocoon is spun in twenty-four hours, the royal insect being complete in about sixteen days, whilst the passage of male egg through the larva pupa state occupies about twenty-five. The males have no sting, but both the females and neuters are armed with this tiny but formidable weapon. The honey harvest is about the middle of September. To get the honey from the hive, the bees are smoked out, and the honey taken, but not all, for sufficient is left to last them through the winter.

[We have much pleasure in printing the above, which—besides displaying considerable intelligence on the part of the young writer—conveys something beyond mere paraphrasing from a bee-book. The pen-and-ink sketches referred to are also very good, those of the queen, drone, and worker bee especially so. Altogether, we consider the result of our correspondent's hour or so among the children forms a suggestive reply to the question whether it is advisable or otherwise to include bee-keeping among the "extra subjects" for adoption in public schools, especially in rural districts.—EDS.].

IN THE APIARY.

LIGURIAN-ENGLISH BEES AND OTHER THINGS.

[2117.] I was pleased to read Mr. Brice's remarks anent his experience with the Ligurian-English cross. This cross I have for years most strongly advocated in all my numerous writings upon bees. I have gone so far as to assert ("Webster's Book of Bee-keeping") that they will show in many cases a 25 per cent. increase in the honey yield, though, of course, this exceptionally large increase in the returns cannot be depended upon always. Yet, in my own experience, I have always found, taking an average of three years with a number of colonies, an increase of quite 10 per cent. When travelling in the north of England and Scotland I did not find this substantiated, but below 52° I am quite confident that it would pay bee-keepers to keep this variety of bee. Suppose a bee-keeper were to keep, say, two colonies of pure Italians; from these two colonies he could always breed the necessary queens for the purpose of requeening the rest with the desired cross variety without the expense of applying to the queen-breeder, although, for the matter of that, an outlay of 4s. or 5s. is not much when it is remembered that a queen will last in full profit for two years.

An idea seems to have taken hold of the majority of bee-keepers' minds that this cross is, with the exception of the Cyprian, the most spiteful one possible. Never was there a more erroneous idea. I would sooner by far manipulate a colony having a mother-bee of the first cross Ligurian-English than any black colony that could be produced. Why I often use no subjugator at all during the working season when packing these bees for railway journeys —a manipulation that, I venture to assert, could rarely be undertaken with blacks under like conditions. When it is considered that every comb has to be removed from hive, tied round with two tapes, and then fitted into the travelling box, and the remaining bees emptied into the same, it is a big manipulation, and one apt to raise the tempers of any bees that are at all inclined to be irascible.

I do not wish it to be understood that I claim that all bees of this variety are such extraordinary honey-gatherers, there being Ligurians and Ligurians, just the same as there are blacks and blacks. Individual colonies of all races will show varied characteristics. Who has not come across colonies of English bees that would never make a return, no matter in what manner they were kept, or what skilful management was applied in their case?

Size of Hole through which a Bee can Pass.—I was astonished to read Mr. Howard's statement that an ordinary worker-bee could get through a hole ⅜ in. in diameter. I have bags in which I carry condemned bees, and in which I frequently keep them for days together; in fact, have kept them so confined for a week. Each of these bags is provided with a 6-in. ventilator of perforated zinc, the holes in which are just *over* ⅜ in. in diameter, yet I have never seen a single bee get through, though they are, as a matter of course, always trying to do so. I know it is impossible, and think Mr. Howard has made a slight mistake in his measurement, or else the bees he tried are something like the Natalians, of which I have just received some queens and workers; they are but little larger than ordinary house-flies.

Burning Inside of Hive with Paraffin for Disinfecting Purposes.—Don't do as I did. I started on this in Leicestershire the other week, and didn't have a sack just handy to throw over. I wasn't away getting the sack above half a minute at the very outside; when I got back that hive was a miniature house on fire, and wouldn't go out until I poured a bucket of water on it. The inside of that hive has got to be repaired, and at my expense too. Another pioneer of bee-keeping has left us, Mr. Cheshire, the one who many years ago infected me with my first attack of bee-fever, from which I have not yet recovered. How well I remember his addressing us boys in his school at Camden Town, after school hours, upon the wonders of the hive as then known, as well as upon his favourite theme, chemistry. Like "R. A. H. G.," when looking back at these times I feel like getting old, yet the memory of this pioneer will last in me as long as I myself do; and after—well, others will cherish that memory and appreciate his works. —W. B. WEBSTER.

QUEEN REARING.

DR. MILLER AND QUEEN RAISING IN FULL COLONIES WITH LAYING QUEENS.

[2118.] I was much pleased to see, on page 453 of last week's *B.J.*, Dr. C. C. Miller's letter on the above subject, though, in the interest of perfect accuracy, I regret my error in crediting the worthy doctor with the first mention of the plan of transferring larvæ into queen cells. I ought to have said that his reference to it in a letter to one of the American bee journals shortly after I commenced my experiments was the first and only mention of the plan that I had seen at the time I wrote. I am sorry also that the name of the Michigan bee-keeper has been lost to posterity, for he merits a place among the "thinkers" of our craft. I am very pleased, however, that my little slip has been the means of placing on record in your columns the fact of Dr. Miller being the originator of the plan of raising queens as detailed on page 453, and so of giving honour where honour is due. With regard to the doctor's experience of the willingness of bees to raise, under certain favourable circumstances, queens in hives where a laying queen already reigns, it is very probable that had the incident related happened in the majority of apiaries it would

have passed unnoticed, and its advantages been lost for some time. I, for one, am therefore thankful that it came under the ken of a bee-master who has the general interest of the craft so much at heart as not to fail in "telling it out" to all, and thus enabling those who can appreciate a good "find" when they come across it to benefit thereby.

Dr. Miller asks if my experience does not coincide with his—first, as to queen cells placed in a hive where bees do not desire to raise a queen, being "emptied of their contents if not sealed;" and, second, if the cells are sealed they are not disturbed until the princesses are about to emerge?" I can only say in reply to the first part of the question, my experience is entirely in accord with that of the doctor. In fact, I believe that nothing will induce bees to accept unsealed cells if they don't want them. I have, to my annoyance, had cells emptied time after time until I have thought bees the most obstinate little beggars imaginable. I cannot speak with so much certainty on the second part of the question, my practice being to leave the batches of queen cells in the hive that raised them as long as it is safe to do so—say, about the tenth day from their acceptance (*i.e.*, when first fed), by the bees, or the 14th or 15th day from the laying of the egg. The reason for this is that I consider that the young princesses are less liable to injury during removal at this stage than at any other. I have had completed cells torn down almost at once in some instances, while in others they have, as Dr. Miller observes, been left untouched till almost the last hour before being destroyed. Cases of non-acceptance have, however, been very few with me, and, in consequence, my experience in this line is but limited. I am, of course, here referring to queenless bees refusing cells. The question is a very interesting one, and one I shall take care to give close attention to next season. The hive I referred to on page 406, had a princess that from various causes had been long unmated, and I attribute the raising of cells in that hive to foresight on the part of the bees, combined with anxiety lest their princess might be lost, or fail to mate, and the fact that the cells were tolerated after the queen had begun to lay, beyond all question bears out the doctor's opinion. I have no doubt that, like myself, he has verified the fact that in all hives where young princesses have been long in mating embryo queen cells are started in various parts of the hive. I noticed this particularly during the last bad season, when, so sure as the young queens had been in a hive fourteen or fifteen days unmated, fresh cells were started, and in some colonies, even where there were no unsealed brood or eggs.

We know that in cases where hives have swarmed or have thrown casts, the sealed princesses left in the old hive are allowed to become fully developed, and if destroyed at all, are allowed in most cases to remain until they begin to "pipe," and thus give the signal for their own destruction. There may be cases to prove the rule of exceptions, but I feel pretty certain that the views expressed on page 453 are correct on this point.

Permit me, on behalf of my brother bee-keepers of the old country, to cordially reciprocate Dr. Miller's kindly greetings.—HENRY W. BRICE, *Thornton Heath, Surrey, Nov.* 16.

BEE-KEEPING IN LANCASHIRE.

RESULTS IN 1894 NEAR A LANCASHIRE CITY.

[2119.] I think it will interest your readers to have an account of the past season's work by a bee-keeper in Cottonopolis, and show what can be done in a bad season and an indifferent locality by careful management and a diligent study of the bee itself. The weather at Easter was glorious, and then, and about that time, I overhauled my four stocks, giving them clean hives. No. 1 was very strong, and had brood on five combs out of ten. No. 2, the strongest of the lot, with brood—big patches; whole frames in some cases—on eight combs out of ten. No. 3, the weakest of the lot, with seven frames and no brood, and very little stores, although a month before they had sealed stores several inches deep along the tops of all frames. But I know they had been robbed by outsiders. But note the sequel below. No. 4, strong in bees, with brood in three combs out of seven. Well, in the full-framed hives I took away the outer combs and inserted full sheets of foundation in the proper places in the middle of the hive. To the others I gave two sheets of foundation, in the centre, spreading the brood. I then commenced stimulating gently—two holes only. In a fortnight I filled up the three incomplete bodies with a full complement of frames. They all worked like—well—like bees, for who ever saw any one or anything work as they will do at times? In another week I put on sections and shallow frames, though early, but I kept on slowly feeding—a pint of syrup a fortnight, no more. I knew they would not store anything in the supers, nor did I want them; but my object was accomplished—namely, to keep up the breeding, and to have the sections and shallow frames worked out, ready for the harvest, and to prevent swarming. Well, you know how dreadfully disappointing May was. Never in my life did I see such wealth of hawthorn blossoms—all useless for the bees, for the weather was too cold and unfavourable for them to avail themselves of it. I kept on slowly feeding in order not to let them flag or get demoralised. On May 30, on coming home from business, I was informed that there was "a swarm of wasps in my garden-hedge." "A swarm of wasps!" I exclaimed. "Nonsense! they are my bees." I went to look, and sure enough a swarm—a magnificent swarm; I never saw one to equal it. I went

round to secure; but judge of my distress when for yards round about the ground was piled up, sir—that is the word—with dead and dying bees. Thinking them wasps, the people round about, with water, stones, and sticks, had tried to destroy them. The clouds were threatening, the atmosphere oppressive, and I knew that a thunder-storm was coming on. Quickly hiving the hanging swarm, I threw them on the platform in front of the hive I had prepared for their future home. Then sending back, picked up half a skepful of seemingly drowned, dead, and dying bees, together with a mass of dirt, sticks, pebbles, grass, and other *débris*. These I covered with wrappering, and placed on the kitchen fender, to be left there all night. The storm was beginning—big drops of rain, the first of a thunder-shower, were falling. The swarm I had thrown down refused to enter, and clustered on the front of the hive. My fears were confirmed. They must have lost their queen. I erected a scaffolding, and over it threw sacking and waterproof felting to protect them, and had just finished it in time before the rain came down in sheets. It had been lightning and thundering all the while I was engaged in protecting them. I could do no more at present. On entering the kitchen my ears were delighted with the sound from the skeps—they were "livening up"—and on taking a peep I was delighted to see them clustering and hanging together. Next day I was up betimes, you may be sure. The night had been very cold—the thermometer going down to 35 degs. fahr.—but the day promised well, though, perhaps, showery. The bees still refused to enter the hive though brushed down again in front. However, with a spoon and smoker I eventually got them in. I then fetched the skep from the kitchen—a noisy crew—and emptied it before the hive, which they quickly entered—not a dead one, and I should think there were five thousand bees thus saved. I spent that day at home. I intended working in the garden, but my swarm claimed my attention, you may be sure. There was something wrong. There was not that alacrity, that diligent and fervent spirit we are accustomed to see in swarms. About 11 o'clock a.m. my lady neighbour called through the hedge, "Mr. Taylor, the hot sun is reviving the rest of the bees, and they are all crawling about the ground. I was quickly round with a skep and we set to work picking up the crawling bees. You may be sure I scrutinized each one and closely scanned the grass. In about five minutes I cried out, "The queen, the queen." I am sure no shout, no hurrah, no delight was as fervent among the 2,000,000 people who welcomed Queen Victoria in Manchester the preceding week. Poor thing! (my poor queen, of course), she could hardly crawl, and kept toppling over on one side as I held her in my hand. I took and warmed her at the fire but she did not seem to improve, so thinking she would perhaps get round quicker in the hive, I placed her at the entrance. She was soon surrounded by her workers. How lovingly they felt her, touched and caressed her, with their antennæ—especially I noted them paying special attention to her abdomen—to see, I suppose, if her ovaries were uninjured. But she would not, or could not, enter. So I picked her up, and dropped her in under the quilt. Going back to my friendly neighbour, we were picking up the bees for about two hours, and I should think saved several hundreds. I have dealt thus at length with this swarm, because I think many of your readers may gain useful hints for future use and guidance, and I hope they will make mental notes of it. This was No. 3. No. 2, examined on Sunday, July 1, which I at once returned. On the 5th it swarmed again. I secured it. Then going to the stock I took off the supers, and proceeded to make a nucleus of two combs, well filled with brood and adhering bees, one comb containing a queen-cell. I also shook into the nucleus sufficient bees to keep it going, and gave them also two frames of foundation. In the place of the brood combs I also put two frames of foundation. Then putting on the sections and adding more, I covered all up and returned the swarms. With my other swarms I had not such luck—from No. 1 I lost two and from No. 4 I lost one. This was owing to my absence. But I have not done with experience. On July 20 the swarm of May 30 sent off a virgin swarm. I was away, but, having anticipated as much from their behaviour, I had told my housekeeper to keep a good look out. On returning home she told me she had secured it, and the bees were in two skeps in my workroom. Taking it for granted, I proceeded to the hive and cut out queen cells and made a nucleus. The nucleus was made on similar lines as the other, only this time I exercised more care in the choice of cell, taking one which I thought near maturity. I cut out thirteen cells, which I sent across to a friend, a distinguished biologist, who subsequently showed them to me in all stages of development, from the newly-hatched grub to the perfect queen. But to the point. After tea I went for the swarm. Alas! to my grief and disappointment, I found it suffocated. My housekeeper had left no opening or ventilation, and they were nearly all one foul-smelling, sweating mass. I was too cut up to begin again, and put the nucleus back, and determined to let them make a new queen, which I am glad to say they did. The nuclei are now on six frames, and both seem strong. And now to go back a bit. About the middle of June I stopped stimulating—putting on worked-out shallow frames and section (which I always keep over) and other sections with foundations. How they did work! They went in and out of the hives like bullets, and my work was taking off sections

and extracting shallow frames. My cottage was termed "Jerusalem the Golden." It certainly was blest with honey. Wherever you went you found traces of the bee-man, and my housekeeper declared she could touch nothing in the kitchen or wash-house without getting honey on her. And now for the results:—No. 1, ten 1-lb. sections, 2 lb. extracted; No. 2, fifty-nine 1-lb. sections, 15 lb. extracted; No. 3, 82 lb. extracted; No. 4, seven 1-lb. sections, 21½ lb. extracted; swarm, 28½ lb. extracted. Total 225 lb. From No. 1 I lost two swarms. No. 4 I lost one. From No. 3—note, I had a swarm which gave me 28½ lb. of honey, besides throwing off a virgin swarm, and yet, Sir, this was the hive which promised the worst at Easter. I trust I have not been too prolix, and that my experiences will help and encourage others to persevere. I may add that I have realised £10. 16s., honey sold, given away 15s. worth, and consumed here about 15 lb., and have still a dozen sections on hand. People will not take sections, though it is by far the best honey.—FREDERICK H. TAYLOR, *Local Hon. Secretary L. and C.B.K.A.*

PREVENTING ROBBING.

[2120.] In "Useful Hints" for this week, you give a method of preventing robbing with excluder zinc, which I should say was very effective. Last year I designed a "preventer" with perforated zinc, it was effective; but for a lot of hives it was too expensive, and wanted too much fitting; so this year I have just cut a strip of perforated zinc with ¼-inch holes, about 8 inches long, and bent it over the strips for closing the entrance; bees at first found it difficult to get through with large loads of pollen, as they tried to get both loads and body through at the same time, but soon learned to put one load through at a time. The robbers were attacked in passing through. I never saw one pass out of a hive.

I had an experimental entrance put up on September 1, at which I have seen no robbing, although robbers have at times hung about the entrance. I tried this entrance after seeing the very comfortable way in which the bees entered a hole in the wall of a house, so at once made a vertical flight-board, with the entrance overhanging; it gives a protection from wet without a porch, and dead bees and all hive cleanings fall clear to the ground, saving much labour: the colony is only a small one—packed to keep a good queen—only three standard frames very moderately covered with bees. To-day I have put up a second similar experimental entrance.—NED SWAIN, *Fordwich, Canterbury, November* 17.

FOUL BROOD.

[2121.]—Referring to letter No. 2113 (p. 454) and editorial remarks thereon, I beg to quote from "B.B.K. Guide-book," by Mr. T. W. Cowan, p. 146, "In some cases it is much better to destroy combs and bees, and thoroughly disinfect the hives; but those who have *perseverance, and can give the necessary time and attention* required for a cure, may try one or other of the methods given." At page 144, he says:—"Bee-pest spreads by contagion so rapidly that in one season a whole neighbourhood may be infected with it, whilst its eradication and subsequent prevention will require *great perseverance* and the bee-keeper's *constant attention*."

As a rule, bee-keepers cannot devote the "necessary" time. Of course, we ought habitually to use naphthol beta and naphthaline or other remedies as preventives in healthy hives, but for diseased stocks, if other apiaries are near, "love to one's neighbour" demands an immediate bonfire.—EXPERIENTIA DOCET.

[It is mainly because our experience teaches us how vain it is to hope that love to any one but self is the ruling motive in most cases where the bee-keeper won't try to keep his bees in healthy condition that caused us to urge the continued use of preventives, and on no account to undervalue their usefulness. No one can deny, much less ourselves, that it is useless to attempt combatting foul brood without both perseverance and attention, and after a whole neighbourhood becomes infected the necessity for this becomes doubly increased.—EDS.]

Echoes from the Hives.

Chester, November 2, 1894.—We have had quite mild weather here for the last few days, and yesterday, when the sun was shining, the bees from two of my hives were as busy as in the summer, and a lot of them bringing in pollen, as if they thought that spring had come round again. Where the pollen comes from I can't say, as there seem to be no flowers anywhere about here. Do you think the bees will require feeding up again? They have had about 20 lb. of syrup to each hive a month ago.—J. LYON DENSON.

[20 lb. of syrup given in October should suffice till March next.—EDS.]

Honey Cott, Weston, Leamington, November 7.—We have had much mild and wet weather of late, although there have been many days on which bees were on the wing. One day on the first week of this month was very mild, and bees at many stocks were carrying in pollen, which I had not noticed for a length of time previously. I have got all my stocks well fed and packed up for winter, of which we had a taste a week or two ago, when six or seven degrees of frost were registered, and we may expect more very shortly. I was reminded to-day that three or four years ago the frost set in early in December and lasted

forty or fifty days right off. Shall probably give candy-cakes to a few stocks that may want a little more food. The incessant rain of a few days ago has severely tried the weather-proof qualities of the roofs of hives. To-day (Saturday) it has been very mild and warm, with plenty of bees on the wing, and I noticed a lot of them on the look out for a chance to rob. If mice are troublesome in places where combs are stored, I can recommend Colin Pullinger & Sons perpetual mouse-trap. Agents, W. B. Fordham & Sons, Limited, London, N. After seeing one of these traps (bought at the Coventry Show) I got one, and it has caught a lot of mice for me. When they had a chance the little rascals were very persistent in gnawing combs. Look out also for the tomtits now lurking about.—JOHN WALTON.

Queries and Replies.

[1207.] *Wide Combs in Surplus Chambers* —This season I fitted all my combs, worked out in shallow-frames, with wide "W. B. C. ends." When the super was about three-quarters full I removed it, placing an empty one in its place, fitted as above, and then placed the partially-filled super on top of the empty one, all frames in the whole hive hanging the same way. On taking the top super, I found that six of its eight combs had been built over the bottom bars, and fixed on to the top bars of the frames in super underneath. I had to cut the combs apart with a wire drawn between the two supers before I could remove the top super. The dripping honey excited the bees, and the pieces of broken comb which remained attached to the top-bars of the bottom super prevented a Webster's clearer from being used. 1. Would replacing the partially-filled super so that its frames hang at right angles to those in the empty super prevent the attachments being made? I understand that an "adapting board" will prevent the attachments, but cannot ascertain what it is or how it is worked from my books or appliance dealers' catalogues. I am not looking forward, however, to the expense of having such a board for each hive, if the attachments can be otherwise prevented. 2. Kindly give your opinion, and if these boards are necessary, information as to their essential features. 3. Is the use of naphthol beta, as a preventive, as good as or better than salicylic acid solution where foul brood is not known to exist?—T. B., *Middlesex, November* 15.

REPLY.—1. Placing the frames in surplus chamber, at right angles to those below, would tend to somewhat lessen the evil complained of, but not prevent it. The chances of combs being joined are also increased when the space between bottom bars of surplus chamber and top-bars of lower hives exceeds $\frac{5}{8}$ of an inch. 2. An "adapting board" is simply a board about $\frac{1}{4}$ in. thick, cut to size of surplus chamber, and having slots a half-inch wide along two sides. These slots run across the frames, admitting the bees from below. Adapters also render the use of queen-excluder zinc unnecessary, when once the combs are built out to the wide spacing, as the queen will not deposit eggs in such deep cells, even if she finds her way into the upper chamber. 3. Naphthol beta is stated by an eminent scientist to be a more effectual remedy than salicylic acid.

[1208.] *Moving Bees.*—Having sold a hive of bees (or rather the bees without the hive), I want your help as to the best time and way of removing them if you will kindly advise? They are now packed up for the winter.—A NOVICE (E. J. B.), *November* 16.

REPLY.—Though not stated in so many words, we take it for granted that the "sale" includes bees, frames, and combs. This being so, and assuming that the purchaser has a hive ready into which the frames will fit, the present hive may be carried to the new location any evening and set on the stand, the bees and frames of comb being transferred the first fine warm day.

Our correspondent gives no particulars whatever as to the respective hives, distance to be travelled, or method of conveyance available; we are therefore entirely in the dark as to the difficulties to be overcome, if such exist, and in consequence cannot advise further unless details are furnished.

[1209.] *Spacing Frames in Surplus Chambers.*—In making boxes for shallow-frames, or those of standard size, as supers for extracting, what was the reason that notching the crate in spaces for the straight-headed top-bars of frames was discarded? In attempting to make my own frames, I found it much easier to make the top-bar straight, and spaced the frames by cutting out notches in the rabbet on which they hang. An old bee-keeper, however, tells me this is done away with now. And as I wish to prepare a few frame-boxes for the coming season, I would like to know through your columns what is the disadvantage of this plan, and what are the advantages over it by putting on the metal or other ends? An answer through the columns of your most useful BRITISH BEE JOURNAL will oblige.—D. MANDERSON, *Caledon, Ireland, November* 15.

REPLY.—The old-fashioned plan of spacing frames by means of notches has been discarded for twenty years or more, because of the obvious disadvantage of its allowing no lateral movement of the frames, which makes it almost impossible to lift a frame out without crushing bees. The "notches" are an intolerable nuisance to any bee-keeper who values ease in manipulating. Besides, there is no need for them; if frames are hung on a

"rabbet" they may be spaced by means of staples or nails, or even by the eye and finger, without any other distance-guide, after a little practice. But lateral movement is so advantageous as to be considered almost indispensable in modern methods of bee-keeping.

[1210.] *Naphthol Beta for Medicating Bee-Candy.*—Is there any objection to mixing naphthol beta with soft candy? Naphthaline is uniformly put in all my old hives, but not with swarms, for the strong scent will sometimes drive the bees out; but might naphthol beta (where foul-brood is feared) be mixed with the candy? If so, in what proportion? —WAKES COLNE, *November* 17.

REPLY.—No objection whatever—indeed, quite the contrary; for whatever tends to ensure immunity from contagion must contribute to the healthfulness of the bees. Use in the same proportion as for syrup-food.

SEASONABLE QUESTIONS.

ANSWERED BY G. M. DOOLITTLE.

DO FIELD WORKER-BEES TRANSFER HONEY TO YOUNG BEES?

On page 731 of *Gleanings* for September 15 I find two questions referred to and asked of Doolittle; and, with the permission of the editor, I will answer them in this department, instead of using questions sent in for this number of *Gleanings*.

The first is the one referred to me, instead of the editor's answering Mr. Churchill. Mr. C. says, "Some time ago I read how bees gave honey to the young ones that were too young to fly." I hardly think Mr. C. read accurately enough, for I have never known of any one who believed that bees too young to fly were of any service in the hive, unless straightening out and taking honey to help them do so could be called service. A bee can fly when from twelve to twenty hours old; and if a bee under this age ever enters into any of the work of the hive, I have never discovered it. The claim put forth, and the one to which Mr. C. alludes, I presume, is this:—Except in times of abundant yields of honey, the field-bee, on arriving inside the hive, gives its load of nectar to some nurse-bee, rather than disposing of this load by depositing it directly in the cells of the comb. That this claim is correct, I have verified time and time again by laying beside a single-comb observatory hive, hours enough, when put together, to make days. If I mistake not, Elisha Gallup was the one who put forth or discovered this fact first, and the same can be found in the early volumes of the *American Bee Journal*. As I have told all of the minutiæ of this matter several times in the bee-papers, I will not go into them here, except to say that, as soon as a loaded bee enters the hive from the field, it hunts around among the nurse-bees to find one which will take its load, putting out its tongue with nectar upon it to determine who will take it. If the nurse-bee who is thus approached does not have its honey-sac full already, we immediately see the nectar passing from the field-bee to the nurse-bee by way of the tongues of both. After a little resting, the field-bee goes forth to the field again, never as much as putting its head into or near a cell of the comb all the while it was in the hive. This nurse-bee may be anywhere from two to sixteen days old; and while of this age it is termed a young bee, although I have the impression, from my many observations, that the bees which do the most of the evaporating of nectar are from six to fifteen days old.

Again, Mr. Churchill errs, or it not accurate enough, when he assumes that a new swarm is composed of old bees; for the truth is, bees of all ages go out to make up the swarm, as is very easily ascertained by any one who will use his eyes with the view of finding out about this matter. I have seen the ground in front of a hive that was casting a prime swarm covered with hundreds of bees under twelve hours old, which tried to accompany the swarm, but were not able to fly, so they ran out on foot; and on hiving the swarm a little inspection showed that it was composed of bees of all ages, from those twenty hours old, or the bees just barely able to fly, to those with ragged wings, just ready to die of old age. In this, as in all nature, God made no mistake when he showed bees how those of all ages should accompany the swarm when they heeded the mandate, "Go forth, multiply, and replenish the earth."

Once more: Mr. C. says, "I have always noticed, as I remove quilts from sections or extracting-combs, that almost every bee is an old one." I should like to know how he knows they are "old ones." If he will try the experiment of changing a black queen for an Italian about June 20 some year, noting the time the first Italian bee hatches, and on the forenoon of the fourteenth day from that time looking at the entrance of the hive, he will find none but black bees issuing from the entrance; while if he removes the quilt from the surplus-arrangement he will find nearly all the bees there to be Italian. If he does not so find it, his experiment will prove different from any I have ever tried, and I have tried such experiments several times. All the experiments which I have tried along these lines have proved Gallup to be correct when he gave this to be the rule in these things:—"Three days in the egg form, six days in the larval form, and twelve days in the chrysalis form, making a period of twenty-one days from the egg to the perfect bee. Very warm weather will hasten the matter, while very cool weather will retard. The hatched bee does nothing but feed itself for the first day or two after hatching, when it commences to become a nurse-bee, preparing chyme for the larvæ, evaporating nectar, secreting wax, building comb, &c., till it is fourteen to sixteen

days old. With a colony in normal condition, the young bee takes its first flight or playspell marking its location, voiding its excrement, &c., when six days old, if the weather is favourable, doing this from twelve to 3 p.m., and continues these 'playspells' occasionally till it is from fourteen to sixteen days old, when it goes out into the fields as a field-worker, does no more of the inside work of the hive after becoming a field-worker, unless forced to by a lack of nurse-bees from some reason, and dies of old age at from six to eight weeks from time of hatching, very few bees ever seeing seven weeks of age during the working season." In the above I may not have given the exact wording of Mr. Gallup, but have the substance, as I quote from memory, not having the time to hunt up the letter containing it, which he wrote me in the sixties. No beginner, or older apiarist, should be without the knowledge contained in the above from Gallup, for upon it hangs much than goes towards making the management of an apiary successful.

PURE ITALIAN BEES AND THE FIVE-BANDED STOCKS.

The other question asked is by Mr. Low, and immediately follows Mr. Churchill's article, and reads as follows :—" I should like to ask Mr. Doolittle this question : Can a five-banded queen be bred, or a queen whose bees are five-banded, from pure Italian queens ?"

I unhesitatingly answer no, for the simple reason that there is no such thing as a *pure* Italian bee or queen, when viewed in the sense of a pure race or variety, as the German or black bee is pure. At best, the Italian bee is only a thoroughbred ; and that these five-banded bees have been produced from what was originally only three-banded leather-coloured bees is a good proof that the above assertion is correct. Perhaps it may be well for me to give right here a bit of history, which I have hestitated for a long time about giving, as I never wish to have a seeming desire to take away the laurels from any one. The history is this : In the early seventies, H. A. King, then of Nevada, Ohio, and Jos. M. Brooks, of Columbus, Ind., were breeding for yellower bees than the average importations of Italians showed. In 1872 I procured some of Mr. King's stock, and continued to improve them till near the eighties, the apicultural world having lost sight of Mr. King meanwhile. At that time, by exchange, I procured queens of Mr. Brooks, and afterward, by purchase, got the last of his very best stock, he going out of the business. In the early eighties I sold one of the very best queens I could raise, along the yellow line, to L. L. Hearn, Oakvale, W. Va., and he and myself have been breeding and exchanging " blood " more or less ever since. So far as I am aware, all of the so-called five-banded bees, of Italian origin, which are in the world to-day, came directly or indirectly from either Mr. Hearn or myself Mr. Swinson, of North Carolina, produced five-banded bees, but did so by a promiscuous crossing of Cyprian, Syrian, Italian, &c. ; but in the King-Brooks-Hearn-Doolittle bees the Italian side has been strictly adhered to.—*Gleanings.*

Notices to Correspondents and Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

GEO. F. TOWNSEND (Studley).—1. We have no personal knowledge of your district of Warwickshire as a honey location, though the county is considered a good one for bee-keeping. 2. The number of standard frames for brood-nests approved by the majority of bee-keepers is ten. It is, however, rather an advantage than otherwise for the hive to hold eleven frames, for they can always be reduced by a dummy board to any less number that may be preferred, while some queens are so prolific as to occupy eleven or more frames for brood purposes.

A. C. WILLIAMS (Scarborough).—*Inventor of the Bar-frame Hive, Comb Foundation, Extractor, &c.*—1. The bar-frame hive was invented in 1851, by the famous American bee-master, Langstroth, born at Philadelphia on December 25, 1810, and happily still alive, and a patent applied for in 1852. It was introduced into this country by T. W. Woodbury in 1854. 2. The credit of being first to devise a machine for impressing wax sheets with the rudiments of the bee-cell belongs to a German, Johannes Mehring, who in 1857 first made a press for that purpose. Mehring's machine was, of course, a very different affair, both in construction and results, from the foundation mills now in use. 3. The honey-extractor, as the machine is now known to bee-keepers in this country, is described in the BRITISH BEE JOURNAL of May 1, 1874. The original invention was, however, due to Major von Hruschka, an officer in the Italian army.

J. PARKINSON (N. Wales).—*Moving Bees.*—If the choice of time for removing is left to yourself, we should let the hives remain where now located until such time as cold weather has kept them indoors for a time (say a couple of weeks). Then choose the evening of a cold day, and have them carried two or three at a journey on a hand-barrow. If this is done, there need be no " fastening up " or " giving ventilation " at all for so short a distance as a quarter-mile.

Editorial, Notices, &c.

USEFUL HINTS.

WEATHER.—The distressing accounts of floods, inundations, "miles of land under water," and the multitudinous catastrophes caused thereby, which have occupied so large a space in the columns of the daily press since our last "hints" appeared, make us wonder how bee-keepers have fared in it all? Apart from anything more serious, such as actual loss of life, or the destruction of valuable property, it is quite within the range of probability that serious loss may have been incurred by the submerging of a few score of hives of bees in some districts of the extensive valley of the Thames, or other low-lying lands of Berks and Bucks. It is said that, "no news is good news," and the fact of having, so far, had no drowning of bees reported leads us to hope that none of our readers have suffered loss in the direction indicated.

We have more than once had occasion to remark on the difference of the past honey season north and south, and "right here," as our American friends say. We extract the following from a recent issue of the *Times*:—

"It is now a matter of history that last year (1893) there was a marked contrast in the characters of the season in the northern and southern portions of our island, the conditions being, on the whole, as favourable to farmers in the north as they were adverse to their brethren in the south. Last year's strange contrasts of season did not find their limiting line at the Tweed, so much as at the Trent. The area north of the Trent, comprising the northern counties of England and the whole of Scotland, was enjoying a seasonable and even a favourable summer at the time when practically all that part of England south of the Trent was devastated by drought."

The singular variations in the experiences of bee-keepers in the north and south this season seem to point to a dividing weather line in 1894 also. In some counties—Kent for one—scarcely anybody has honey to sell, but midlanders and northerners seem to have had good yields. In Kent they are actually importing honey from Yorkshire!

FOUL BROOD.—This subject is now attracting the attention of bee-keepers so forcibly and continuously that it augurs well for its being effectively dealt with in the near future. It seems intolerable that so serious a source of danger to the bee industry should be allowed to continue without some means being made available by which those who have the best interests of the pursuit at heart should have their efforts paralysed through the crass stupidity—in some cases—of those who not only refuse to help themselves, but decline to allow others to assist them. If the mischief were confined to those who apparently prefer to have diseased bees about them than healthy stocks we should not mind, but our complaint is that "sinks of contagion"—as some of these places are—should not be destroyed and put out of the way of doing harm whether their owners like it or no. This is what bee-keepers ask for in seeking to obtain compulsory powers for dealing with foul brood among bees with the help of the Minister of Agriculture. And it is quite probable that by a united effort on the part of those most concerned in strengthening the hands of the Committee of the British Bee-Keepers in the action they are proposing to take shortly, the deputation to Mr. Herbert Gardner on the subject, will have been received by that gentleman and "something done."

If the advantages to be gained through the expenditure of time and money now devoted to technical instruction in bee-keeping—money, be it noted, from the public funds—is not to be minimised, and the work rendered non-effective, some official help must be given in controlling the spread of foul-brood, which is the worst stumbling-block in the way of success. One would think that sufficient evidence had already appeared in our pages and elsewhere to constitute a strong case for inquiry, but another "case" has just come to our knowledge—

the facts of which are vouched for—which is worth quoting. A bee-keeper in Kent, whose knowledge of bees was limited and confined to skeps, secured a bargain in the shape of a lot of frame hives in which the bees had died from foul brood. These hives were duly stocked with swarms from their new owner's skeps, and, as may be supposed, several of them soon became more or less diseased, and eventually several beeless hives lay about with the diseased combs in them, which combs the owner would neither destroy himself nor allow anyone else to make away with. But not long ago he had occasion to change his location to a place a quarter of a mile away, and before leaving he actually cut out the foul combs and left them behind him at the old spot to be visited by his own and his neighbours' bees *ad libitum*. The poor man's idea was, we understand, to take only "clean hives" to his new place and leave the "rubbish" behind!

ESSEX BEE-KEEPERS' ASSOCIATION.

The fourteenth annual meeting of this Association was held at the Council Chamber, Corn Exchange, Chelmsford, on Tuesday, November 13, Mr. T. J. Weston, of Wickham Bishops, presiding. The income and expenditure account, presented by the hon. sec., Mr. F. H. Meggy, showed that during 1893 the income had exceeded the expenses by £9. 13s. 6d., so that, with the donation of £5 received from the Countess of Warwick, president of the association, towards the deficiency of £11 on the income account of 1892, and a capital of a few pounds in hand, the association had a balance of £22 standing to its credit on January 1, 1894. The result on the year's working was attributable to rigid economies, among which may be named the discontinuance of the autumn county show, a matter of regret to honey growers throughout the county. Mr. Meggy's reports explained the delay in holding the annual meeting for 1893 as arising from purely personal reasons not likely to occur again. The report of the expert, Mr. W. Debnam, after touching on the results of his spring and autumn visits to members in 1893, expressed his views on the question of technical education in some spirited sentences which we reproduce elsewhere. It was cheering, he reported, to find that steps taken by him in the spring of 1893 to prevent the spread of foul brood had been to some extent rewarded. The Chairman, moving the adoption of the reports and accounts, said they ought to approach the County Council to put the keepers of bees upon the same footing as keepers of cattle and swine, so that they could have the power to destroy hives infected with foul brood. The Hon. Sec. and Mr. Durrant also spoke on the subject, and, eventually, a resolution suggested by the chairman, himself a thoroughly practical bee-keeper, who has suffered from the scourge under discussion, was passed to the effect that the hon. district secretaries or local advisers of their associations be each asked to send in a report, between now and February 1 next, of all cases of foul brood that, so far as they could ascertain, had occurred in their neighbourhoods during the past season. The formal business being finished, the chairman called on Mr. Durrant to give his lecture, illustrated by lantern views, on "Bees and Bee-keeping." Some practical observations from the chairman and others followed, and the meeting closed with the usual votes of thanks.

(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

STARTING BEE ASSOCIATIONS.

A WORD TO SUSSEX BEE-KEEPERS.

[2122.] I noticed that your analysis of the entries at the dairy show "drew" a Sussex bee-keeper's confession. I was rather ashamed of my own county not being represented, but if other parts were as mine, there must have been uncommonly few Kent samples fit for exhibition. I hope our Sussex friend will be found in the ranks of the exhibitors next year, for we cannot afford to lose him. How I wish some enterprising bee-keeper would essay to start an association in Sussex. I grieve over Sussex. She could beat us all if she organised her bee-keepers. What particularly struck me at the dairy show was the great number of bee-keepers visiting the show

from Croydon, Sutton, and that district. There is, of course, an association for Surrey, but its operations seem focussed about Guildford. Is there no one in Croydon who could lend our veteran Captain Campbell effective aid in the way of organising this end of the county? It offers an excellent field for work, but needs a man of energy. Now that we are commending the bee-keeping industry as worthy of increased attention from the authorities, it is of the greatest importance to have our bee-keepers organised, not only in Surrey but in every county. I am quite sure there is a lot of power available round Croydon. Ssusex ought to make a beginning this winter, and Surrey lay her plans for going "full speed ahead" next spring. — KENT BEE-KEEPER.

P.S.—With the advent of the Royal Counties' Agricultural Show at Bournemouth, could not Hampshire start an association? Hampshire is a grand county for bee-keeping. Do you try, Messrs. Editors, to awaken a pioneer?

SENSES OF ANIMALS AND INSECTS.

SIR JOHN LUBBOCK'S EXPERIMENTS WITH DOGS, ANTS, AND BEES.

On Saturday, the 26th inst., at the Working Men's College, Great Ormond Street, Sir John Lubbock, M.P., the principal of the college, delivered an address on "The Senses and Instincts of Animals," in which he gave an interesting account of some of his own experiments on the subject. Considering the long ages during which man and the other animals had lived upon the earth, it was, he said, remarkable how little was known about the other animals, and a great many people held contradictory opinions about them. All held that the dog was a very clever animal, but it was doubtful whether it could understand two and two made four. He tried experiments with his own dog, a black poodle. He made two slips of cardboard, on one of which he wrote the word "food," and the other he left blank and placed them on two saucers, one containing bread and milk, the other empty. In ten days the dog had learnt to distinguish between the two saucers. Afterwards the cards were placed on the floor, and he was told to bring one, receiving food when he brought the right one and nothing when he brought the blank one, and in a month he had learnt the difference. He also made experiments as to the dog's perception of colour, but after six months had to give them up entirely without success. He was anxious also to ascertain the arithmetical condition of the dog's mind. He had always wanted to know how the world appeared to the lower animals, and whether they had the same senses as men. He had spent years in studying the habits of ants. They had very large communities, though they had no contested elections; they did very well without a House of Lords, and equally well without a House of Commons; they educate their children without a school board, and had no county council or district council, or even a parish council. Yet they seemed to do very well indeed, and knew one another in a wonderful manner. If a strange ant was put into a nest, it was at once attacked, but when he separated a nest into two parts for a year and a half, and then put some of the ants from one half into the other they were tolerated and not molested. With regard to their senses, he could obtain no evidence that ants and bees were able to hear; he tried them with the most excruciating sounds without any effect. He tried various experiments to see if ants could communicate with their friends at a distance, and came to the conclusion that they could not. He also tried whether bees could hear, by placing honey on a musical box, which he kept constantly playing for a fortnight, but without success. As long as they could see the box they came, but not otherwise, and evidently could not associate the sound with the food. There was no doubt, however, that they could see colours. The existence of flowers was a strong reason for supposing so, and the experiment he tried of placing food on papers of different colours had also proved it. To discover whether their limits of vision were the same as ours, he tried many experiments, and came to the conclusion that they could see rays invisible to our eyes. Indeed, the familiar world around us might be quite different to other animals; they might see colours invisible to our eyes, and hear sounds inaudible to our ears; and there was a whole untrodden field of study. To arrange and collect specimens was a mere preliminary, though very necessary; to watch the habits of animals, to study their instincts and intelligence, to realise what the world appeared to them, was the true interest of natural history, and might give us a cue to senses and perceptions of which we had at present no conception.

Queries and Replies.

[1211.] *Forming Nuclei—Feeders.*—I should be obliged if you can answer the following questions in your valuable BEE JOURNAL. 1. Shall I be right in the following method of forming nuclei:—I have four stocks of bees and two of them are in a hive with the "Wells" dummy between them; these are looking in another direction to my other hives, and will have to be completely turned round in order to get them where I want them to stand next spring. I propose, therefore, if they are strong at that time to take them, as soon as the bees begin to fly, to a place two miles off for a week or two, and put them where I required when brought back to my

own place. I thought that this would be a good way to get a comb or two for nuclei with bees on that would stop, by having my queen cells ready on the return of this hive, and taking combs from both stocks for this purpose. 2. In "La ruche Dadant Modifiée," par Ed. Bertrand (Mr. Cowan's friend), he gives an idea for using self-opening tins as feeders, and so far as my poor French enables me to understand, makes holes in the cover or can-lid and covers this over with linen. Now in the self-opening cans I have (golden syrup tins) the lids are more than ¼-in. below top edge of the tin. I, therefore, ask how do the bees get to the syrup? Does it drop through the holes upon the linen of itself first, or how? because, if these really act, they would be a cheap feeder.—T. ECCLES, *Standbridge Cottages, Milnthorpe, Wakefield, November* 22.

REPLY.—1. We cannot see any commensurate advantage in the plan proposed. In the first place, the hives may have their positions changed without the trouble of a temporary removal two miles away, such as would be necessary in summer time. If the change of location is effected in the winter, after the bees have been kept indoors for a few weeks by frost, none will be lost. Further, the removal of combs of brood and young bees at "queen-rearing season" will throw the robbed stocks back, and so lessen their chances of yielding profit. 2. Self-opening tins make useful and cheap feeders with a few holes punched in lids, but when used so no covering of calico or any similar material is required, as the bees take the syrup direct through the holes. On the other hand, if the mouth of tin is covered with linen or muslin, the lid must be dispensed with. When used in the latter way, however, a common glass pickle-jar makes a much better feeder than a tin, because we can see at a glance when food is taken.

[1212.] *Moving Bees.*—I am sorry to give you the trouble to again reply to my query (1208, p. 468), but not being used to bee matters accounts for my not being so explicit as I might have been. Well, on the occasion referred to, I sold the *bees only*, neither combs or frames, not thinking of the difficulty of supplying food to the bees at this time of year, but suppose it would be next to impossible for an ignoramus like myself to manage them thus. If it cannot be done, could you kindly tell me what would be a fair price for the combs and frames, as I do not know what to charge for them? The frames with the sheets of foundation cost 6½d. each, but having the comb formed and filled sufficiently with a cake of candy to last the winter (that is not my opinion, but of the expert who saw them), I don't know the value of them. They are on eight frames. They have to be moved from Woodford to Gravesend, which was the reason for selling bees only, as we thought they would be more convenient to move; but we have been quite forgetting other inconveniences. Your reply in BEE JOURNAL will greatly oblige a novice.—E. J. B.

REPLY.—A rough travelling box will be necessary for sending the bees and combs safely by rail. The inside dimensions being as nearly as possible those of the hive in length and width. The depth is not so important. A light rack or notched strip of wood must be nailed along the bottom of box, and so arranged that the "teeth" of the rack project upward, so as to keep the bottom bar of frames equally distanced. The latter must also be firmly fixed on their top sides to keep them firm and rigid in transit. Bearing in mind your entire inexperience of bees, it would be well to enlist the help of the expert referred to in packing. He could also give a better idea of the value of the stock than ourselves, seeing that he will have the advantage of inspection which we have not.

[1213.] *Queen Cast Out of Hive.* — Will you kindly give me your advice under the following circumstances:—I have one hive of bees, a last year's swarm, which did not swarm this year, and owing to the bad season they have done little in the way of honey-gathering. I had them on the moors for five or six weeks, but they had not filled the frames in the body of the hive when I fetched them back again, so that I did not take any honey from them, but packed them up for winter. They were a fairly strong stock, and I left them to winter on eight frames, all the combs being from one-third to one-half filled with capped honey. In addition, I put several cakes of candy under the quilts. I submitted the candy to a friendly bee-keeper, as I feared it was rather too hard, but he thought the bees would take it, so I packed them up with quilts and chaff-case over all. Three weeks afterwards, as I was passing the hive at dusk, I noticed a small heap of bees on the ground, just in front of the hive, and on taking them up and searching through them I found the queen, as I suppose, and with her about 230 bees, all dead. I send you the queen for inspection. I at once, as early as practicable, looked at the hive, but the day being very cold I did not take out the frames, but I found plenty of uncapped stores, and the candy which I had put in, the bees had already commenced feeding on, and they seemed strong and lively. Now, sir, could you please enlighten me as to reason of the queen and bees leaving the hive, and also advise me what to do under the circumstances? I cannot suppose that there were two queens in the hive, as breeding had ceased some time ago, and I had seen no signs of queen-cells at any time. Should I endeavour to winter the bees safely, and get a queen as early as possible in spring; or could I get a queen now either with or without a few driven bees? As I am a beginner, I should esteem it a great favour to have your advice through the BEE JOURNAL,

which I take regularly.—LEARNER, *Sheffield, November* 19.

REPLY.—There is nothing in the appearance of queen sent to account for death. As the bees in the hive are reported "strong and lively," there is just a chance of the little heap of dead bees and queen being the remains of a small "hunger swarm" from some other hive. Any way you cannot now do anything but wait till the return of warm weather enables you to examine the frames and ascertain the condition of bees, &c.

[1214.] *Destroying Weeds about Hives.*—Your querist, Ambrose A. Ogle (1204, p. 458), last week anticipated a question I had been intending to ask you for some time. The "weed-killer" alluded to probably contains arsenic, and I have used with great success a similar preparation on my garden-paths away from the hives. I believe carbolic acid, 1 oz. to a gallon of water, to be an efficacious weed exterminator, and should imagine that bees would not touch that owing to their objection to the smell. Should you see any objection to the use of the latter round the hives? Now I think of it, the proportions seem wrong, and I should imagine it would be too weak to destroy the weeds. I have not yet tried it, but I had made a note of it from a gardening paper.—PERCY SHARP, *Brant Broughton, Newark-on-Trent, November* 20.

REPLY.—There can be no objection to the use of carbolic acid about hives, no matter of what strength it may be applied. The bees will give it a wide berth if left to themselves, and so no harm would follow.

[1215.] *Moving Hives.*—I want to move my hives about 20 ft. from their present position. Is it necessary to move them only 2 ft. at a time, or may I move them the whole distance at once, provided that I do so in cold weather when the bees are not flying? I shall feel much obliged if you will kindly answer this in your journal. — LIONEL BURRELL, *Sideup, November* 22.

REPLY.—If the removal is deferred until such time during the coming winter, as the bees have been confined to their hives for several weeks, they may be removed at one operation. The appearance of their present location should, however, be altered as much as possible, and all trace of the hives taken away from thence.

[1216.] *Honey Vinegar.*—In B.J. of the 8th inst. (p. 447), you give recipe for making honey vinegar, proportion, 1 kilo of honey to 8 to 10 litres of water. According to French tables I make the amount in English to be:—1 kilo = about 2¼ lb. (honey); 8 litres = 14·08 pints (water). Is this correct, please? If not, can you kindly give correct proportions in English? The above seems, to my mind, to be about the correct quantities.—H. HILL, *Ambaston, near Derby.*

REPLY.—Your measurements are quite near enough for the purpose; but, to be exact—1 kilo = 2·204, or about 2¼ lb; 1 litre = 1·76, or 1¾ pints.

IS BEE-KEEPING PROFITABLE?

SIR,—"Expert" has raised the question, "Is Bee-keeping Profitable?" and intends, I suppose, at some future time, to answer it according to his own experience. I am glad, for one, that an expert has taken up this question. But surely, Mr. Editor, "Expert" has made some mistake when he talks about bees being left natural, or, as he terms it, "managed on purely natural principles." The very opposite is the way to gain large results. This has been proved by men of very large experience. "Managed on purely natural principles" must mean for the bees to make the whole of their comb, and this has been proved beyond dispute to be a fallacy in beedom too long indulged in. But I suppose it means, in this instance, that "Expert" has tried the bar-frame hive, with the fixing of comb foundation, and all the appliances, and found it wanting. Bar-frame hives, so far as my experience goes, ar ethe very opposite to this. In this system you have the bees under wonderful control, and you can assist them so nicely in fixing the sheets of foundation, arranging the size of your hive to suit the strength of your colony, and by giving them room, to prevent, to some extent, swarming; everything in this system seems to favour success. My average this year is 26 lb., but if it had not been for the bar-frame hive and the section crate, with each section prepared with sheets of foundation, my bees could not have accomplished this. It is entirely due to the help I could give them through the bar-frame system. Not only so, but how useful this system is in the time of swarming; at a very small cost you can have a contrivance made suitable to fix the frames in, and in twenty minutes you can have the frames transferred to the hive and the bees on to work in their new quarters. If "Expert" has something newer and better than the bar-frame system to show us I will wait, but if he has nothing but the old system to present to us, then I am in doubt as to his ability to convert us, even though we live in North Durham. However, all will agree that this has been a bad summer for bee-keepers generally, and if anything can be done by "Expert" to give encouragement, we shall be glad to have it. I don't know whether it is controversy that "Expert" wants in introducing this subject to your columns, or simply to give advice; whatever may be his view, he may depend upon one reader that will pay special attention to what he has to write, and that is your humble correspondent, NOVICE, *November* 20, 1894.—*Consett Guardian.*

LECTURE ON BEE-KEEPING.

Mr. M. H. Tilley, the instructor appointed by the Dorset County Technical Committee, gave a lecture at the Temperance Hall, Broadwey, on the evening of Wednesday the 14th inst. Miss Samson, hon. secretary, presided, and there were about fifty persons present. No doubt the flooded state of the village prevented many more from being present, the water at some places being two or three feet deep. The few bee-keepers residing in the district were present, and all appeared much interested. Many questions were asked, and answered by the lecturer. Mrs. Baunton, one of the committee (also of late a bee-keeper), was also present. She unfortunately lost all her bees a few years ago by a flood such as the inhabitants are suffering from at the present time. This lady also put several practical questions, which were satisfactorily answered by the lecturer. Mr. Tilley in his remarks explained that bees benefited their crops much more than most persons were aware, and gave some practical illustrations as a proof. He also explained the enormous waste that is going on every year in country districts owing to the want of bees to collect the honey that was being washed back into the earth. He considered Broadwey one of the best districts in the county for bee-keeping; yet there was scarcely any part of the county where it was so much neglected. An optical lantern and a number of slides showing the wonders and the contents of a bee-hive, and an improved bar-frame hive and a quantity of bee-keeping appliances, were used to illustrate the lecture, which lasted about two hours. Mr. Tilley also gave instruction on the successful wintering of bees, stating that last year he succeeded in wintering over 100 hives without the loss of a single hive (at his own bee farm). This he said he could not have done a few years ago. He ascribed this success to study, perseverance, observation, and experience. He now felt that with proper knowledge on the subject it was not a difficult matter to winter bees with almost certainty. At the close the lecturer was heartily applauded, and Miss Samson said she hoped shortly to have Mr. Tilley there to give them another lecture on this important subject. Bee-keepers or other persons requiring instruction in the important subject of bee culture should now avail themselves of the opportunity by making an application in writing to the local secretary of the Technical Instruction Committee, when, no doubt, their wishes will receive prompt attention.—(*Communicated.*)

INSECTS AND FLOWERS.

Insects assiduously visit flowers for food-nectar, and by their visits the pollen of one flower is carried to the stigmatic surface of another, so effecting cross-fertilisation. The contrivances for making insect-agency efficient are so numerous, so palpable, and so exclusively perfect as to entrance the observer. One flower has its nectar in a tube, to reach which the proboscis of the visiting insect must touch and split a delicate tissue, and expose the moist adhesive surfaces of a couple of pollen masses, which adhere to and are carried away by the insect in such a position that, in visiting another flower of the same species, it must deposit the pollen where alone it can do its fertilising work. Another is so contrived that, to reach the nectar, the visiting insect must touch a sensitive surface, that causes the rupture of the tissue which confines a pollen mass, but which, on the rupture of the tissue, flies out like an arrow on the insect, and, having an adhesive end, sticks to the insect, which is startled away, and, visiting another flower of a like kind, deposits in the right place the fertilising pollen which it unconsciously carries. Another flower has an ingenious arrangement by which it lures an insect into its corolla, and then imprisons it, provided with plenty of food, until its anthers are ripe, when it sheds its pollen over the insect, after which, by a special organic arrangement, it opens the prison door and lets its visitor emerge, charged with pollen, to visit another similar flower, which will inevitably be in a condition to receive fertilisation from its pollen-covered body. Thousands of other instances might be given.—*Dr. Dallinger.*

TECHNICAL EDUCATION IN BEE-KEEPING.

The Expert of the Essex Bee-keepers' Association spoke with no uncertain sound on the question of technical education in bee-keeping in his report presented to the annual meeting of the Essex Bee-keepers' Association on Tuesday. "This year," he wrote, "I cannot conclude my report without expressing my views—at least, a little—on the technical education question, as it concerns our association, and therefore our members. Speaking as one who has worked among all classes of bee-keepers in this county, and at the same time knowing what a splendid field Essex is for the production of first-class honey, I quite fail to see or understand why a grant should not have been made, and made freely, and direct to the E.B.K.A., by the Essex County Council, seeing, as it must have done, the manner in which the work of the association has been carried on year after year, and knowing also that bee-keeping is a branch of industry that could be taught and made both interesting and profitable to many of our rural population if only done on a good teaching system. Many things long felt necessary could with a grant be fully carried out. The foul-brood pest could be dealt with much more effectually than at present, as there can be little doubt that, while members' hives are affected, non-members' hives may be still more affected with the disease. Then, again, the

free circulation of the BEE-KEEPERS' RECORD among the cottage bee-keepers of the county, not considering whether they were our members or not, would, I am sure, in particular, effect a great improvement in this industry. There are many ways I could suggest to the Technical Instruction Committee which, to my mind, would do considerably more real good to advance bee-keeping than has been attempted to be done in this county at present. I do not for one moment think those gentlemen who have the control of this technical education scheme know what is wanted to advance bee culture. Gathering from what they at present sanction, I say most decidedly they do not. And I think that up to this time few, if any, of the best practical men of this county have ever been consulted on the matter, important though it be."—*Essex County Chronicle.*

ADULTERATED BEESWAX.

"We are pleased to see that this is a subject which has received a little of the attention it deserves, especially in the Bristol district. Mr. James Brown, hon. sec. of the Bristol B.K.A., in one of his lectures cautioned dealers against selling adulterated wax, as well as giving them a simple test. Still in the face of that, at the Bristol Police-court on Wednesday, the 14th inst., before Messrs. A. N. Price and Henry Daniels, Albert P. Pingstone, oil and colourman, of 82, Redcliff-hill, Bristol, was summoned for an offence under the Food and Drugs Act. P.C. Norris (river police) deposed that on October 17 he bought of the defendant some beeswax, for which he paid 1s. 4d. Inspector Fletcher produced the report of the City Analyst, stating that what was sold as beeswax was solid paraffin with a little fatty matter coloured with coal-tar dige. It would be worth about 5d. per lb. The defendant said he bought it as French beeswax and sold it in good faith. The magistrate stated that the public must be protected, and the defendant would have to pay 20s. and costs.—*Bristol Mercury*, November 17.

HONEY AND BEESWAX.

These articles are now largely imported from other countries, and we have every reason to believe that they are largely adulterated, as witness the frequent prosecutions under the Food and Drugs Adulteration Acts. It is well known that pure English honey will granulate in a few weeks after being extracted, whereas this foreign glucose honey scarcely ever granulates; and as for wax, which is usually adulterated with paraffin, a rough and ready test of floating it in a solution of water and methylated spirit is often used—the pure article will be found to sink, while the other will swim. The Bee-Keepers' Association have had labels issued to registered bee-keepers, under which seal the public can be sure of obtaining a genuine article and weight for their money, it being a frequent practice to bottle honey into jars not holding more than from 12 oz. to 13 oz., and labelling it a 1 lb. bottle. We are pleased to see that the authorities have devoted their attention to this serious matter of adulteration, and feel sure there is plenty of room to do great service in protecting the public and encouraging this minor rural industry, which chiefly benefits the cottager.—(*Communicated*).

MARKETING HONEY.

READ AT THE CONVENTION OF AMERICAN BEE-KEEPERS, HELD AT ST. JOSEPH, MO.

By George W. York, Editor American Bee Journal.

Page upon page has been written on the subject of marketing honey; for all realise that, unless it is well sold, there is no profit or just remuneration for the labour and skill involved in its production.

A successful marketing of honey presupposes its good quality, and suitable condition for proper and satisfactory handling. Possessing these two very important factors, the honey is then ready to seek the much-desired customer.

Upon what market shall it be placed? Aye, that's the question! Shall it be disposed of in the home market—probably among the producer's friends and neighbours—or shall it be shipped to the nearest large city to find purchasers? Both ways have their advantages as well as disadvantages. So much depends upon the producer himself, that what might be best for one bee-keeper would be all wrong for another, equally successful in honey-production.

Each producer, of course, desires to realise the most money possible for his crop. Upon that point all will agree. But how about the city market for such an object? The city honey commission merchant, as a rule, if he does any business at all, is an overworked or overcrowded man. Imagine, if you please, 100 different lots of honey being shipped to him from various parts of the country, in different conditions, and all coming so as to be in stock at the same time. Now it will be utterly impossible for him to give to each shipment equal attention, and some of them must of necessity be neglected, or await their turns. In the meantime some of the shippers may notify him to hold their honey for a certain price. Then, of course, the honey of those who do not give any definite instructions as to price will be sold first, and probably at a lower figure. By that time the market is practically supplied, and the rest of the honey in the commission merchant's hands must be held, or the price lowered in order to at all effect sales. Thus it will be readily seen that, at best, selling through a city commission firm must often be quite unsatisfactory, especially as there is so much to risk in shipping honey, lest the combs be broken down and thus be

ruined, or the extracted honey packages may leak, and in that way cause loss.

I fully believe that the best solution of the question will be found in the home market, where the producer can personally look after the details of the work; and, although unable to do the actual retailing himself, he can so supervise it as to realise the largest proceeds from the sale of his crop of honey.

Of course, it requires a good talker to sell honey, as well as anything else that has merit which needs to be shown to the desired purchasers. But as nearly everybody likes to eat honey, it should not be such a difficult task to dispose of some in nearly every home visited.

As to the price to be asked, certainly the city market quotations should not govern: for, as I have shown, that market may have become overstocked, and for the time being the price lowered to such an extent that there could be no profit whatever to the producer.

It has been suggested that, unless a good price be asked, it will not be secured. And there is more truth than poetry in that hint, though, if the price asked be too high, there will also be fewer sales, and, consequently, less money obtained, but more honey left on the producer's hands. It seems to me that comb honey, in most home markets, should bring not less than 20 cts. per single section, or six sections for 1 dol. Extracted honey should retail, per single pound, at 15 cts., or 8 lb. for 1 dol. These prices certainly are not high, and yet, probably, large enough to sufficiently reward any reasonable producer in a fair honey season.

There is much in education in this matter of the price of honey, as well as to its constant use in the family. By starting out rightly, a better price can be secured and maintained, and also more sales be made; while if there is a wrong beginning, it will be well nigh impossible to correct it later on. By all means study the consumer's ability to pay; supply a pure article of honey, put up in an attractive form, and there will be little trouble about future orders after the first purchase is made and used.

I think that bee-keepers who have a home market, well worked up, often make a very great mistake when they allow themselves to get out of honey for sale at any time of the year; for if a regular customer can get no more honey from the producer who has been supplying him, he will likely apply at the grocery store, where he may be supplied with a mixed article at a less price, and also correspondingly inferior in quality, though it may, after a time, give partial satisfaction. The result will be, that the next time the honest producer wishes to sell that customer more honey, he will be expected to furnish it at very nearly "store prices," for a superior article. To avoid such an unfortunate condition of things, I would always have honey on hand, even if it be necessary to get it from a bee-keeper at a distance, but always being assured of his honesty and reliability.

I am sure that the home market for honey has undreamed-of possibilities for successful development; and the wide-awake, progressive twentieth-century honey-producers will find in it a veritable gold-mine in exchange for their pure golden honey—nectar fit for the gods, and hungry humanity's best food and medicine.—*Gleanings.*

THE USE OF A DIARY IN APICULTURE.

I am of the opinion that there are few bee-keepers who receive the benefits from a diary that they could. Too many are apt to associate a diary with past events, whereas the most practical and valuable uses of it is the record of the future. It will not be the object of this article to show the advantages arising from a well-kept record of the past, but rather to illustrate its value when employed as a help for the future. Various ways have been recommended to remind the apiarist of duties to be performed in the apiary, duties that if neglected at the proper time must result in loss and trouble. There is nothing to my mind like a diary for relieving one's memory in the management of an apiary, either large or small. It need not be a printed one, one to cover the whole year, but an ordinary blank book, with 100 or more pages, is what is required. The best book is one that is large enough to contain a record of the colonies, and then the latter part can be used for the diary proper. Have a page for a day, or more if necessary. There is no one who has kept bees to any extent but knows that each day there will arise work that should be attended to later on. For example, about ten days ago I had occasion to place a few frames of unsealed brood behind a division board in an ordinary colony. I neglected to record this to be attended to to-day. The consequence was, several young queens were reared and hatched, the colony swarmed, the old queen was killed, and a large apple tree had to be ascended to secure them. When a colony swarms I make a note of it in my diary to be attended to in the way of destroying unneeded queen cells seven days later. In strengthening weak colonies after it is not desirable to increase the laying capacity of the queen, I usually place the brood behind the division board. Now these should be examined for cells ten days later, and a note made of it, for that day a young queen is hatched. Make a memo of it, for ten days later, to see if laying. You may notice a colony that will soon require more room. Mark it down on the day it should be attended to. You deprive a colony of their queen—this fact should be recorded, so as to look after their cells nine or ten days after.

In fact, every work to be attended to at a specific time should be recorded. In beginning the day's work you simply look at your diary for the day. You can see at once the work that must be done, and then the regular duties of the day will follow. In queen rearing I have found it very valuable. I formerly made a note of all such needs consecutively, but a page for each day's requirements is much better, and will be found superior to the various devices recommended for this purpose.—G. A. D., *in Canadian Bee Journal.*

BRACE COMBS AND SUPERING.

I see by the different bee-papers that Doolittle has caused quite a commotion on the smooth, placid waters of bee-keeping, by what he wrote on page 272 of the *American Bee Journal* for August 30. That this commotion may not result in harm to myself and the fraternity, with your leave, Mr. Editor, I will explain my position a little more, to see if we may not have a little better understanding of the matter at issue.

Years ago, soon after I commenced bee-keeping, considerable difficulty was experienced in getting bees to enter the sections readily to store surplus honey, many colonies refusing to go into them during the whole season, where box-hives were used, having 1-in. board for a top, with holes cut through for the bees to pass up into the sections. Few frame-hives were then in use, when compared with the vast number of box hives and gums which were found standing at very many of the farm-houses all over the country. To obviate the difficulty of getting bees into the sections, Mr. Miner invented a box-hive having no permanent top-board, but in its place slats were used, standing up edgewise, for the bees to build their combs on, and when the sections, or what were then 6-lb. boxes, were put on, they were put directly on these slats. When no surplus arrangement was on the hives, a cloth was laid on these slats, or, more properly, over the top of the hive, as brace-combs were built between the slats, and on top of this cloth a board of any thickness was placed, while cap or hood, deep enough inside to go over the boxes, was used to cover the whole. It was with this Miner hive that I commenced my bee-keeping career, purchasing bees in said hive to start with.

When I commenced to use frame-hives I thought of these slats in the Miner hive, and so made my frames very much like those described by Mr. Hill on page 307 of the *Bee Journal* for September 6, which he found at an apiary that he was sent to work in. After using such frames for a year or two I became disgusted with them, as Mr. Hill did, on account of the sagging propensity of the top-bars to the frames, and the general "mess" which always occurred in taking off the surplus honey. I then began experimenting, and finally adopted a top-bar a plump 1 in. wide by $\frac{5}{16}$ in. thick for the Gallup frame, and for the Langstroth frame a top-bar $1\frac{1}{16}$ in. wide by $\frac{5}{16}$ in. thick, that being the size which gave me the best results, all things considered. I would have preferred them thinner, but when I came to use them so, the top-bars would sag when the bees filled the frames solid full of honey, and if made narrower the bees insisted in covering the tops of them with comb, and in times of a great honey-flow filling this comb with honey, so I was driven to the adoption of the above. I have always used a bee-space of $\frac{5}{16}$ in. at the ends and tops of the frames, with $\frac{7}{16}$ in. bee-space at the bottoms of the frames.

With such frames and bee-spaces it is a rare thing that any honey is ever stored between the sections and tops of frames, while not to exceed from five to fifteen brace or burr combs are found jutting up above the tops of the frames, and these brace combs are always left, as I told in my former article. I still consider these few bits of comb as great helps; nearly as much so as I consider the "bait" sections which I use on every hive to start the bees into the sections early in the season, as I have so often given in the different bee-papers. Wherever bits of comb are, there bees are at home on them, and are climbing over them, inspecting them, &c., when they would not be there at all otherwise, unless crowded there by an over-populous hive, and this is why I called these bits of combs "little ladders."

After having decided on the above frames, certain supply dealers began advocating a top-bar made from $\frac{3}{8}$ in. lumber, and from $\frac{1}{4}$ in. to $\frac{3}{8}$ in. thick for top-bars for the Langstroth frames, the claim being put forth that, by using such, the sections would be so near the brood that the bees would enter the sections without hesitation, and better results in honey be obtained. Henry Alley, myself, and others expostulated, but the thing was pushed to such an extent that those ordering frames different from these were told that unless they fell into line with those using the regular goods they must expect long delays in having their orders filled, as the machinery was kept busy nearly all the while turning out this regular line; and next, all were cited to these "regular goods" being the standard, and pleasing, as they had orders for them by the carload from all over the country, till the majority of frames in use were of that "regulation size."

Thus things went on till thousands, if not millions, of these narrow, thin, top-bar frames were in use, and when it was found that they sagged, tin bars were put in the centre, for a support when wiring them for the use of comb foundation. Thus every one buying supplies was forced to use these sagging, burr-comb provoking, section-daubing frames, who did not have the "backbone" to stand out about the matter, till the apiary that does not now have, or has not had, such frames in it, is the exception and not the rule.

In the above Mr. Hill will find his "unaccountable reason" explained.

But, presto! a change comes, and we go to the other extreme, now having a frame put before us with a top-bar as much too heavy as the other was too light, and all bee-keepers are called upon to fall "into line" once more, and some wonder why it is that Doolittle insists on keeping on in the "even tenor of his ways," and fears that his teachings will lead others astray. I wonder if it has never entered the heads of supply dealers that these changes involve much expense to the bee-keeping fraternity? Let me draw a picture:—

A man, with a family consisting of wife and little ones, has been struggling on as the apiary increased, to pay for the necessary hives, &c., and each year looking towards the desired number of colonies he wishes to keep, all the surplus from the bees which can be spared from the actual necessities of the family, is being put into these fixtures for the apiary. The goal is in sight, and he comes in some morning with a smiling face, and says to the "goodwife"—"Next year we shall have all the bees and fixtures we shall want, except sections and shipping-cases, and this expense for hives, &c., we have had heretofore will be stopped, when I shall be able to get you a better dress, and the children better clothes, so they may be more respectable for Sabbath-school, and, if Providence smiles upon us with a good honey year, I may be able to have that luxury I have so long longed for—a small telescope to study the works of my Father above in the starry heavens."

The countenances of all are lighted up, as only such little comforts and luxuries can lighten them, and a happy looking forward is the result. The next year burr combs and daubing and killing of bees are much worse than usual with the "regulation frames," while the supply dealers have found out that what they formerly pushed are not just the thing, so a change is inaugurated, and in his vexation over getting off his surplus, our bee-keeper resolves that, come what will, he never will stand this thing any longer, so instead of the nice things which had been planned, the money from the surplus is all sent off again to get the thick top-bar frames, which will overcome the difficulty, and the use of which requires a general overhauling of all the hives in the apiary, if new are not bought.

Next, frames at fixed distances looms up, then a divisible brood-chamber hive, to lessen the cost of production, and so on, until the bee-keeper is obliged to put off his long-looked-for pleasures, year after year, and before realising them death comes and calls him away. This is not an overdrawn picture by any means, for all this has come under my notice as above described.

In the interests of poor, struggling humanity I plead for as few changes as possible, and that none be made until after a trial of several years, to know whether such change is of advantage or not.—G. M. Doolittle, *in American Bee Journal.*

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Busy Bee.—The plant sent is *Euphorbia lathyrus*—wild caper, or caper spurge. It is indigenous to France. It belongs to the great family of *Euphorbiaceæ*, which secrete a very acrid, milky juice, more or less poisonous in the different spines. In these spines the acridity is so far neutralised by mucilage as to reduce it to a simple purgative and diuretic. The flowers are very much visited by bees, as they secrete nectar abundantly. The capsules are sometimes pickled, but are very inferior to capers (*Capparis*), which belongs to another family, or even to the capsules of nasturtium, which are perfectly harmless, whereas those of the wild caper may produce bad results if indulged in too freely.

W. R. N. (Sussex).—*Bee Association for Sussex.*—There is now no Bee-keepers' Association in Sussex, though in former years a flourishing one existed there. The time seems opportune for reviving the flagging energies of Sussex bee-keepers, and we trust the appeal of "Kent Bee-keeper" on another page of this issue will result in something being done in that direction.

R. T.—*Selling Honey.*—The question of long or short credit is for yourself and the firm you are dealing with to arrange. Most persons would think the honey should have been paid for before now if it is a first transaction. 2. The firm named is a good and reliable one for bee-appliances. 3. The season of 1894 is generally considered as only a very moderate one for honey, and in some districts of the south it has been very poor indeed.

Thos. Lee (Macclesfield).—*Bee books for sale.*—The best course for our correspondent will be to advertise the books for sale in our "Prepaid Advertisement" column, giving the dates of publication or naming the edition, of course. If offered at a low price, buyers would doubtless be forthcoming.

J. Jones (Pinner) inquires "how long ought a winner of a silver medal for honey to wait after the show is over before he receives it?" In reply, we must confess our entire inability to enlighten our correspondent beyond saying that the secretary of the show "implicated" is the most likely gentleman to answer the question—in this particular case, anyway.

*** Correction.—In second column of page 466 in last week's issue—twenty lines from top—the line "No. 2 examined on Sunday, July 1," should read "No. 2 *swarmed* on Sunday," &c.

Editorial, Notices, &c.

COMPULSORY POWERS.

We are led to believe that some misgivings have arisen in the minds of a few readers of this journal with regard to the effect they consider is likely to follow the inclusion of foul brood among bees in the Contagious Diseases (Animals) Act. Why any uneasiness—not to say alarm—should have been occasioned in consequence, as we understand, of the observations we felt called upon to make in our last two issues is not easy to see. Anyway, there is not the smallest occasion for it, and the fear—entertained, we are told, by some—that the "inspector" will be pulling their hives to pieces, when supers are being filled, to examine the brood-combs for foul brood, is not only groundless, but absurd on the face of it. Surely it should strike the most inexperienced among us that no man in his senses would dream of interfering with stocks of bees under such circumstances. As a matter of fact, compulsory powers are mainly sought for to meet extreme cases, where serious damage is being done to unoffending persons through the unjustifiable obstinacy of a few who cannot be called bee-keepers at all in the true sense of the word. If foul-brood inspectors are in the future appointed, they will no doubt work much on the lines of our county experts, who, as is known, make periodical visits to members of their respective associations only at seemly and proper times. What would be thought, we ask, of a county expert going to a member's apiary in July and pulling off storyfied supers from a big, thriving colony to examine the brood-combs in order to see if there was a queen below? Yet this is exactly analogous to what our alarmist friends seem to dread.

There is at present, and always has been, on the part of many bee-keepers a decided objection to making known the fact of foul brood being prevalent among their bees. This objection, however, would, we feel quite sure, disappear in a very short time when the evil was being effectually grappled with; and the preventive measures taken were seen to be so entirely for the general good. It is often urged, by earnest friends of the pursuit, that half measures are useless in dealing with the disease; that it must be stamped out by burning bees and combs so soon as a stock is seen to be affected; some going so far as to insist on burning hives and all! But those in the best position to judge are compelled to admit that no matter how effective and desirable such drastic measures may be to those who regard it from the right side of the hedge, *i.e.*, a healthy apiary, it is no earthly use recommending a course which, in so few instances, is likely to be carried out.

The value of a good frame-hive and stock of bees is, to the ordinary bee-keeper at least, not a matter of small moment, and when several hives are simultaneously affected the difficulty of inducing him to "burn the lot" is proportionately increased. Moreover, our exceptional opportunities for knowing all this enables us to realise what it means better than most folks. But if reasonable compensation was afforded for any loss sustained the situation would be entirely changed, and render comparatively easy what is now so difficult to obtain, viz., permission for a competent person to decide whether total destruction or "treatment" is the best course to follow, and a cheerful acquiescence in the measures needed for carrying it out. Just imagine how enormously the difficulties of dealing with foul brood would be lessened if bee-keepers were all of one mind on the subject! Unanimity is, however, seldom to be had in matters so directly personal; and so let us endeavour to enrol as large a body of bee-keepers who are "right thinkers" as our opportunities of putting the matter fairly and justly will enable us. If we are blessed with compulsory powers let us use them as gently as is compatible with effectiveness in dealing with the merely careless, but stamp out real hot-beds of foul brood without mercy, and pay for the blessed privilege of doing it! Surely none but those who object from "pure cussedness" (as they say in America) can see ought but right and justice in this.

Anyway we feel quite certain that those who now regard with alarm the steps proposed to be taken in the direc-

tion indicated above may dismiss their fears as entirely groundless, and that they will themselves admit this on considering the question fairly and without personal prejudice.

SPECIAL NOTICE TO OUR READERS.

We invite attention to the considerable help it will be to us if readers who are direct subscribers will kindly peruse the two paragraphs on inside page of cover, which relates to the terms on which Subscriptions and Discontinuances are dealt with. We shall also be glad if those whose subscriptions expire with the current year will fill up the form on second inside page, and return as early as convenient.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

COUNTY ASSOCIATION LABELS.

DO THEY HELP TO SELL GLUCOSE?

[2123.] A short time ago, at a local shop of good repute, I purchased a bottle of honey—about 1 lb., with screw-top cover—for 1s. It was granulated, and I believe pure English honey. *There was no label on the bottle.* Yesterday I went to the same shop and asked for another 1 lb. of honey like that I had before. I took the bottle home, and found it had not a screw cover, but a cork. Moreover, *it bore a label* of the Bee-keepers' Association, stating that its contents were genuine honey! Alas, on sampling the stuff, I found it was a very nasty glucose. Of course, not granulated. I took it back to the shopkeeper, who said he could not understand why the "honey" was not good, as *he had it from a lady who went in for the business.* Fortunately I got a bottle of the first-named granulated honey in return. Readers may draw their own inferences from the above facts. My deductions therefrom are far from satisfactory. A shilling a pound for honey, including the bottle—a *labelled bottle*, with evidently adulterated honey! What can be done to prevent such mischief? If I had been unacquainted with honey, and had got that bad bottle of glucose at the first venture for my shilling, I should never have bought any more. Can we wonder that the honey trade is poor if such practices are allowed. I could say more, but I must save your space.—A WORKING BEE, *Salisbury, December* 1.

[Our correspondent should take steps to verify his conclusions with regard to the bad honey (or glucose if it be such) by communicating with the secretary of the association whose label it bore. One of the strongest points in favour of labelling the honey of members by county associations is the facility it affords for tracing the facts connected with disputed matters of this kind, and we are sure the secretary will render every assistance in this direction.—EDS.]

REQUEENING HIVES.

IS IT NECESSARY? OR HELPFUL?

[2124.] 1. Is it really necessary to requeen hives after the queen has bred two or three seasons? I know most bee-keepers think it is, but this query was suggested by an answer given by G. M. Doolittle in the B. B. J. for November 15 (p. 460), where he asserts that bees will naturally supersede their queen when the same becomes too old for profit.

If this query could be well ventilated, and the opinions of a few of our leading apiarians got upon the subject, I think the bee-keeping community would be benefited generally. For my own part, I have frequently noticed in hives I have not requeened (when the queens were four years old, unless they had been superseded naturally) that these have done quite as well as hives with queens in their first and second years. — J. J. KNEWSTUBB, *Brackenber, November* 28.

[It is not "really necessary" to renew queens at all, seeing that the bees will themselves usually depose or supersede such queens as become old and worthless. At the same time, we do not consider it good management to have queens heading colonies after "two or three seasons'" service. Mr. Doolittle's reply quoted dealt with the question of only keeping one-year-old queens in the apiary, and we quite agree with him that "queens in their second year do fully as good work as younger ones." We think it will be found very advantageous, however, to preserve all surplus queens available at swarming time, and utilise them in replacing queens that have done two years' service. This much

may be said without disparaging Mr. Doolittle's views, for it must be remembered that the climate of America is more favourable to apiculture than ours. Anyway, we think that a great majority of our leading bee-keepers in this country agree in viewing young queens as of the utmost importance in achieving success. At the same time, we will welcome discussion on the point in our pages.—EDS.]

SELF-HIVERS.

NOT A FAILURE.

[2125.] Will you kindly permit me to answer our esteemed friend, Mr. Webster, through your valuable paper. In speaking of inventions for queen-trapping, self-hiving, &c., in the December RECORD, he, Mr. Webster, asks: Has a swarm ever been caught in one? I should like to respectfully inform him that in my own apiary during the season of 1894 three swarms hived themselves entirely without any assistance out of four hives that had my self-hives affixed to them, for full accounts of which I refer him to the BEE JOURNAL of June 7 and July 19. He will find there recorded the slight hitches that occurred as well as the successes. The appliance has since received several alterations, which I think greatly improve it. At any rate my opinion of it is such that I am patenting it. I shall be pleased if Mr. W. wishes for further proof to send him a photo of swarm in the "hiver," taken about twenty hours after the bees had hived themselves. I can also, if he wishes, send him addresses of independent eye-witnesses to whom he may refer. With regard to clipping of queen's wings, there are hundreds of otherwise good bee-keepers who cannot pick her out from among her sisters, even if willing to mutilate her.—GEO. WM. HOLE, *Patcham, Sussex, November* 30, 1894.

BEES IN THE NORTH OF SCOTLAND.

A COSY "NEUCH" FOR AN APIARY.

[2126.] After examining my hives and packing up my bees for winter, I set out on a combined pleasure-and-business trip to the north. Between Inverness and Aberdeen I found the season was considered not up to the average on account of rain. I paid a pleasant visit to the apiary of Mr. Archibald, who received me with great kindness, and showed me round his beautiful and well-kept residence of Firlands, which is situated in a nice cosy neuch, protected from the north winds by the Cluny Hill, about a mile to the south of my native town of Forres, Morayshire, surrounded by rich agricultural land, woods, and heather. The climate is exceedingly dry and salubrious, the Hydropathic Establishment close by being well patronised by health-seekers. Mr. Archibald's place is a little paradise, beautifully situated, the garden and hothouse aglow with all kinds of rare and beautiful flowers and plants, everything around displaying taste and love of the beautiful in Nature.

The apiary is most complete. He believes in the "Symington" hive, which is comparatively rare in the north; they are made to open by removing a board the whole height of the hive, the body boxes (of which there are two in each) one above the other, and draw out like drawers, making access very simple I observed there was about six inches space at the floor on which were several bits of naphthaline. He works chiefly with the extractor, and this season took as much as 200 lb. per hive off several stocks, besides a considerable quantity of heather honey in sections, which latter are worked chiefly in "Cowan" hives. In the store-room I saw hundreds of jars of beautiful clover honey, of which he gave me a sample; there were two large extractors to hold four frames each, besides all the other appliances needed in a well-ordered apiary. In another room is kept a good stock of hives—new and old—crates, sections, &c. A third room is specially fitted up as a carpenter's workshop, furnished with the most modern and expensive tools, and Mr. W. can use them, too, for I saw specimens of his handiwork in hives and various appliances, &c.—indeed, he is quite a genius in his way. I came away feeling I had learned something from one who has "go" in him and just the man to succeed in anything he takes in hand. This is a splendid bee district.

I saw about twenty bee-keepers in my journey, the majority, I am sorry to say, are, however, only bee-keepers in name, taking little or no interest or trouble with their bees, and some very much afraid of them. In these cases all are complaining of the poor district. While staying in Aberdeen for a few days I ran up Deeside, and found this a large and successful field of bee-keepers. When entering Crathie railway station, I observed quite a little village of bee-houses, and found the station-master a shrewd, hard-headed, intelligent man, and a most enthusiastic and successful bee-hand. He informed me that he had a good take of honey this season, and that, on the whole, in Deeside the season was an average one. I saw his hives, and was struck with the neat and perfect work, each hive being well-made of yellow pine an inch thick and highly finished. He makes money, he says, by selling hives, bees, and honey.

When in Perth I saw some fine heather honey got from the district; it was sold for 1s. 3d. per lb., and retailed at 1s. 8d. The season in Perthshire was below the average. Over all heather honey is very scarce.

Regarding the price of honey, I find the average is 1s. per lb. retail for clover, &c., for heather, 1s. 3d. Some bee-keepers complain that they cannot find a ready market for their produce. I'll give them—in vulgar phrase—

a "tip": don't rush your honey into the market; if you do, you are at the mercy of the buyer, who takes advantage of you, and gives you 6d. or 8d. per lb. Get private customers if you can, who will give you 1s. to 1s. 6d. per lb.; or put a 6d. advertisement into a local or other newspaper, offering genuine clover or heather honey at 1s. or 1s. 3d. per lb., and you will find customers. There is generally a good demand for genuine home honey.—L. M. MILLER, *Helensburgh, N.B., November* 29.

STEALING BEES.

[2127.] I have read the BRITISH BEE JOURNAL for about eighteen months past, but never read or heard of such a case as I am about to relate. On the night of November 26, 1894, some one came and deliberately carried off two skeps of bees from my garden, leaving me with two bar-frame hives. The thieves broke the skeps away from the floor-boards, and did not leave a single bee behind, dead nor alive, so I think it must have been some one that had handled bees before, or they would not have done it so clean. The largest skep was one holding about four gallons, a new one of my own make. A large swarm was put in it early in June, nearly filling the skep with bees. The other was a very old skep, not much more than half the size of the first-named. I think they must have been carried away some distance in a light cart, as we can't find any trace of them about here. I fed the bees up for the winter, giving the largest lot 12 lb. of sugar, and the other 6 lb., made into syrup, so I think they would get through till March. Do you think the bees would live after being exposed to the cold on such a night as November 26? And could they have been wrapped up and carried away and put on another floor-board?—T. AUSTIN, *Bodiam, Sussex.*

[The thieves would no doubt have a cloth ready on which to lay each skep when lifted from the floor-board, and by tying it at the four corners above the crown of skep no bees would escape and no harm happen to anyone but the victim of the theft, viz., yourself. As the object of the thief or thieves was evidently not to destroy the bees for the honey in the combs, but rather to sell the stolen hives, there is some chance of our correspondent hearing further of the transaction by inquiry, as any honest person buying skeps of bees, not knowing they were stolen, would make their purchase known if information of the theft is given to the police authorities.—EDS.]

STARTING BEE ASSOCIATIONS.

[2128.] I should like to inform your correspondent, "Kent Bee-Keeper" (2122, p. 472), in BEE JOURNAL of November 29, that there is already a county association in Hampshire, namely, the Hants and Isle of Wight Bee-Keepers' Association. Surely "Kent Bee-Keeper" cannot have been a reader of the BRITISH BEE JOURNAL for any length of time, or he would have seen reports of shows, &c., held by the above association, and advertised in this paper year after year.—H. ROWELL, *Hook, near Winchfield, Hants.*

ESSEX BEE-KEEPERS' ASSOCIATION.

FOUL BROOD AND COUNTY COUNCIL GRANT.

We print the following from the *Essex County Chronicle* of Friday, the 30th ult., by request of the writer, and as bearing upon what appeared on the same subject in our issue of last week:—

SIR,—In your last issue there is an account of the annual meeting of the Essex Bee-keepers' Association, which I, as a member, had great pleasure in reading. The chairman made allusion to the disease among bees known as *bacillus alvei*, or foul brood, which any bee-keeper who has once had it would take every precaution to stamp out; and if in his immediate neighbourhood would, I am convinced, take any amount of time and trouble to check. Now, Essex is noted as a honey-producing county, its honey generally is of first-class quality, and the E.B.K.A. is one of the most energetic of county associations. It was the first county in the kingdom to make application to the County Council for a grant for technical educational purposes; and a grant was given, but I believe under rather wrong ideas, as an association with thoroughly practical officials ought to know how best to use it to the best advantage. But I suppose the powers having control of the grant thought differently, as I find after the second grant it is withheld, which I consider a decidedly backward step, for, in other counties, as, for instance, Lancashire, Cheshire, Berks, Kent, Northants, Hertfordshire, and others, it has been continued with, I believe, great success as regards the way it is applied.

Now, as our expert has given, in his report, his version of it, I think that what few words I have to say are not out of place. The E.B.K.A. send the *Record* monthly to cottagers who subscribe 2s. 6d. per annum. It is published at 2d.; then add postage ½d., so there is his 2s. 6d. at once—to say nothing of the two visits which are given him every year from the expert. Surely a county like this can afford the paltry sum of £100 for practical work in the endeavour to give lessons to the very class I thought it was intended for when the Government started the technical scheme. There are a great many who at present cannot afford even that small subscription, and cases of foul brood often occur—and I know some at the present time. Surely such people ought to be able to have advice, and help, if required, to cope with such a

disease as that; as in a single season a whole district can become tainted. I think, with the chairman, that until it is made compulsory to notify all cases to some authority, or until the County Council Technical authority appoint some competent person to deal with the disease, such cases will continue.—A MEMBER.

WEATHER REPORT FOR NOVEMBER, 1894.

WESTBOURNE, Sussex.

Rainfall, 5·96 in.	Brightest Day, 17th, 7·65 hours.
Heaviest fall, 1·54 in. on 11th.	Sunless Days, 10.
Rain fell on 20 days.	Above average, 30·05 hours.
Above average, 2·61 in.	Mn. Maximum, 49·9°.
Max. Temperature, 57° on 3rd.	Mn. Minimum, 39·4°.
Min. Temperature, 32° on 22nd.	Mean Temperature, 44·6°.
Minimum on grass, 26° on 22nd.	Maximum Barometer, 30·45° on 21st.
Frosty nights, 2.	Minimum Barometer, 28·58° on 12th.
Sunshine, 91·10 hours.	

L. B. BIRKETT.

GARDENERS AND BEE-CULTURE.

AT the Club Hall, on Tuesday night, November 27, Mr. F. Earley presided at the meeting of the Tunbridge Wells Gardeners' Association. There was a large attendance. On the completion of the ordinary business of the meeting, Mr. Thomas Marsh delivered an address on "Bees and Bee Culture," in the course of which he gave a mass of information on a subject evidently new to many members of the association. Mr. Marsh detailed the history and the fine results of bee labour in the production of honey. He said all species of bees were useful to the gardener if not always friendly to him, for they all aided in impregnating his flowers, many of which would otherwise fail in production of either fruit or seed. Still bees were often injurious by causing cross fertilisation, and actually injuring flowers in a garden in their efforts to get at the honey. The honey bee was the most active in this operation, but the bumble bee and others of the robust species visited flowers in rough weather when the honey bee would not venture from the hive. Mr. Marsh defined and classified the various species of the bee family and outlined with honeycomb illustrations the methods of labour in summer and winter seasons. He said queen bees laid thousands of eggs daily, and their power of reproductive energy was wonderful. The lecturer pointed out the value of honey as an article of food and luxury. He said it was important to know that bees not only gathered honey for their owner, but also brought fruit into gardens which they visited by fertilising the blossoms of fruit-bearing trees and plants. In other ways the bee was useful to gardeners and might be cultivated with advantage. As to the old dread of bee-keeping through fear of being stung, why that was a mere nothing when one got used to it. The value of home-made honey in contrast to imports from abroad was urged as one of the many advantages of bee-culture by gardeners. A discussion followed the paper. Several questions having been asked and answered, the lecturer was warmly thanked for his lucid exposition of the advantages and otherwise of bee-farming. On the table were some choice examples of fruit and flowers exhibited by members. (*Communicated.*)

Queries and Replies.

[1217.] *Re-queening Hives, Queen-Raising.*—I have seven stocks of bees, cross-bred between Blacks and Carniolans. I have also one stock of pure Carniolans, and I wish to re-queen all the cross-bred bees with pure Carniolans next year. I purpose to take a frame from the Carniolan stock and slice it across, about one-third way down from the top bar and cut notches in it, so as to join three cells (worker with eggs in), and insert it into a hybrid hive, having first made the bees queenless about twenty-four hours beforehand, and when they have sealed over the queen-cells insert them in three-framed nuclei (one cell in each). Then move the nuclei and the Carniolan stock a good way off. I have inserted a frame of worked-out drone-comb in the centre of the Carniolan brood-nest for the queen to fill with eggs, and so have a good supply of Carniolan drones to make sure of pure fertilisation. (1.) How long after the comb has been notched will the bees seal over the cells? (2.) How long after the cells are sealed will the queens hatch out? (3). Had I better kill off all drones from the hybrid hives with a drone trap? (4.) Do you think this plan will succeed? I shall be much obliged if you will answer these questions in the *B. B. J.*—R. BAYLEY, *Charterhouse, Godalming.*

REPLY.—1. Queen-cells are sealed about the eighth or ninth day from the laying of the eggs, but the actual number of hours may be varied a little by the temperature at the time. 2. Queen-cells hatch about the eighth day from the time they are sealed, or fifteen to sixteen days from the laying of the egg, according, as already said, to the temperature. 3. Our advice is to let the drones alone, but to limit the drone-comb in the brood-nests of all hives. 4. We do not think the plan proposed will accomplish the end in view. Having replied to queries put by our correspondent, we feel it incumbent upon us to add that before attempting operations requiring ex-

perience, beyond what appears in his letter, a reliable book, which treats fully of queen-raising should be studied, in order that no mistakes may be made in carrying out what is proposed. The back numbers of the JOURNAL for the last few weeks contain much information on this very subject of queen-raising, which should be helpful. It is, of course, impossible in this column to enter into full details as to what is necessary in re-queening an apiary, but the subject requires most careful consideration, or the end in view, which we take to be the improvement of the strain of bees, may be entirely frustrated. Many bee-keepers prefer the hybrid Carniolan to the pure variety, and it requires experience and judgment before any one can decide a question like this with advantage. Those who endeavour to improve their strain of bees usually set to work on sound, practical, and scientific lines, and on these lines it is considered "faulty" to raise from the same mother-bee both queens and the drones with which the latter are to mate, and the result would only lead to disappointment. Again, why speak of moving the nuclei and the Carniolan stock a good way off? We do not know the object in doing this. Advanced bee-keeping cannot be learnt in a hurry, and to be successful, especially in such an undertaking as that proposed, requires the utmost care and skill, and above all things requires the operator to learn to "walk" before he attempts to "run."

[1218.] *Best Time for Buying Bees.*—I intend starting bee-keeping next year, and am reading up Mr. Cowan's admirable book. I wish to know:—1. If I can purchase a stock of bees in March or April, the weather being very fine, instead of having to wait till the swarming season, without any harm to the stock? 2. Can you furnish me with the names of the hon. sec. and expert of the Glamorgan county B. K. A.? — KENELM G. MUMBLES, *Glamorgan.*

REPLY.—1. March and April are the best months in the year for buying bees. 2. The hon. sec. of the G.B.K.A. is Mr. E. Thornton, Bridgend.

REMOVING BEES FROM HOLLOW TREES.

HOW THEY DO IT IN CALIFORNIA.

Smoke the bees at the entrance to the hollow. Cut with an axe an opening about 8 in. wide so as to locate the position of comb, then proceed to cut until you are able to remove all the comb, transferring the brood by fitting the larger pieces into frames and tying with cotton twine as required to hold in position. After removing the comb, watch the bees to locate the queen. If allowed time they will usually form one or two clusters in which the queen usually is found. Take a piece of cotton cloth 1 yd. square, fold once in centre, dip in water, wring dry, covering the hands with it. Scoop the bees into a hive with full drawn comb. It is always better to give some comb or brood, and at times when there is no honey flow feed at once.

If the inner wood of the tree is much decayed, patience and tact are required to get the queen. It is often better to allow them to hang over night after removing comb, ere you take bees out. We often take bees from a trunk 10 or 20 ft. above the ground by the use of a staging. We prefer to do so rather than fell the tree, especially during warm weather. By careful management bees are safely transferred at any time when the temperature is not cold enough to chill them. I have personally removed more than 100 swarms during the past five or six years, always with success.

From 100 to 250 lb. of honey are often taken, and from buildings in a few instances as many as 600 or 700 lb.—W. A. WEBSTER, *Kern Co., California.*

BEE PARALYSIS.

WHAT MAY BE DONE TO PREVENT ITS SPREADING.

Sitting down this morning to carry out my promise to furnish you with an article on bee paralysis, I happened to think of a letter that I had written for the *American Bee Journal*, which was not forwarded for the reason that just as it was finished I saw a letter from another Southern apiarist refuting the article referred to by me, and therefore I did not send it. It contains a description of the disease, and perhaps you can, by striking out such parts of it as you choose, make it serve, or by turning to the back numbers of the BEE JOURNAL, which I have failed to preserve, you can fill out the blank in my letter, and use the article as it is. Having suffered severely from not recognising the signs of the disease at first, and being of the opinion that it is a worse affection than foul brood, I hope that the bee journals will familiarise their readers with the subject, and teach them its dangers. The fact is that I believe that there is no topic of more vital interest to apiarists than this. If you take it up, and institute a systematic inquiry as to the nature, history, and cure, you will do more for the cause, and be of greater benefit to the bee-keepers of the country, than you could do in any other way.

While on the subject of bee paralysis I will say that I have tried the sulphur cure, salt, re-queening, and salicylic acid and transferring to new combs, and all these remedies have failed in my experience. There are of late letters published in the periodicals devoted to bee culture, stating that sulphur has cured the disease. Last year

Mr. Golden and others have reported cures from the use of salt. Now it is strange that all these have failed in my hands. The only explanation that occurs to me is that the return of warm weather always makes an apparent cure, and the reported success of these various remedies may be due to the fact that the disease gave way to the approach of summer weather. I fed one colony on salted honey for weeks without any appreciable benefit.

Judging from the number of letters published during the last two years reporting cases of bee paralysis, it must be that the disease is greatly on the increase. North of the Mason and Dixon line it does not seem very serious in its effects, but in this latitude most of the colonies that suffer from it are worthless to their owner. The colony runs down in numbers during the honey flow, which comes in the spring, so that they store no surplus. It may recuperate in summer and build up so that the hive is full of bees, but it all amounts to nothing, as the bees store nothing but honey-dew during our hot weather. When cool weather returns the disease reappears to blast the hopes of the apiarist again. It would be far better for the luckless apiarist to lose his bees outright than to be tantalised by the hopes of a final recovery.

There are some truths in regard to bee paralysis that I regard as settled.

First, the disease is highly infectious. A queen from a colony that is infected, though she show no sign of the disease at all, will infect the colony into which she is introduced. Robber bees will carry the infection. Where the hives are kept within a foot or two of each other the malady will spread from one to another until all are diseased. This is effected, probably, by the bees, which by mistake enter the wrong hive.

Secondly, the various remedies so far proposed are wholly ineffectual to produce a cure. The correct method of procedure clearly is to destroy the diseased colony, and disinfect the hive and combs, if the disease is detected, before it has spread. If it is permitted to remain in an apiary any length of time it gets a foothold by spreading to neighbouring apiaries, and to colonies in the woods, so that it will effect a permanent settlement in a county, and thus remain to blast all prospects of success in apiculture in that locality. This has already happened in one part of California.

Finally, it is suggested that no queen-breeder should ship queens from an apiary that is infected. I took a queen from a colony that had apparently made a perfect recovery from the paralysis, and had shown no signs of the disease for six months, and introduced her into a colony in my brother's apiary; and the result was that in a few months his bees perished from the disease. As a class, I have found that people who get interested in bees are morally superior to the average of men and women. But there are bad men in the business. The man who sold me the colony which infected my apiary persists to this day in asserting that he has never had bee paralysis in his apiary, and now I suppose that he is selling queens and scattering the disease all over the length and breadth of the land. Every scientific man, who is acquainted with modern ideas, knows that there is no such thing as spontaneous generation, and that an infectious malady like this has its origin in some germ or bacillus, and is propagated, like small-pox, from contagion. A conscientious queen-breeder will not sell queens from an infected apiary. I propose that the bee journals invite their readers to report any outbreak of the malady, and if it comes from a queen purchased from a breeder, to give his name to the world, so that he may have no further opportunity to disseminate contagion through the country.

You will render an untold good to your readers if you will invite communications of this sort. Probably 99 per cent. of your readers have no queens for sale, and you will enlarge your subscription list if you will let it be known that you will undertake the task of exposing those unscrupulous persons who have so little conscience as to spread disease and death in the apiaries of the land. The various associations ought to take the matter up, and do everything possible to prevent the further spread of this malady. The journals devoted to bee culture should keep the matter before their readers, and invite communications from those who have anything of interest to give to their brethren in regard to this subject. No man should purchase a queen from a breeder without first inquiring whether there had been for six months past any bee paralysis within two miles of the apiary. If a breeder should then make a false statement in reply, to the effect that there had been no bee paralysis in his apiary, and it should turn out that the queen was infected, a prosecution for obtaining money under false pretences might be maintained successfully. Queen-breeders who are honest, and who have not got the infection, will find it to their advantage to add in their advertisements, "There is no bee paralysis in my apiary." In my opinion it will not be many years before it will be impossible to carry on the business without some assurance of this sort being given to the purchaser.

Cholera and yellow fever are excluded from our country by quarantine methods. This has resulted from an understanding of the nature and methods of the propagation of these diseases. There was a time when these visitations were regarded as inevitable and as Providential. It is now known that they can be controlled; and so, if it were understood that this disease is infectious, and the proper precautions are taken against the spread of the disease by bee-keepers at large, it is possible to prevent its further dissemination.

[Here follows what Mr. Ford originally wrote for the *American Bee Journal*.—Editor *Bee-Keepers' Review*.]

In a late number of *American Bee Journal* was an article copied from *Gleanings* upon the poisonous character of the pollen of the Southern yellow jasmine, to which I wish to call the attention of Southern bee-keepers as written under an apparent misapprehension. The writer maintains that the pollen of this flower is poisonous, and that the bees swell up and die in great numbers during the period when these flowers are in bloom. I have not the article before me, but the readers of the *Journal* will probably recall it.

I am aware that many mistakes are made in the progress of every department of scientific inquiry occasioned by two obstacles: One is the habit of jumping at conclusions without sufficient data upon which to base them, and the other is the lack of close and accurate methods of observation, and patience in verifying and collating them before accepting them as proven. We are most of us prone to these mistakes.

It is admitted that one intelligently observed and accurately established fact is worth a whole volume of theories to the intelligent apiarist, who reads the periodicals in which all find so much pleasure.

Now, in order to enable our friends who are interested in this subject to get at the truth as to whether the instincts of the bee fail to protect her from laying up for the young of her well-ordered community a food that is poisonous, and calculated to destroy instead of preserving it, I propose to submit, with diffidence, in opposition to the views of the above writer, that the symptoms of poisoning from the yellow jasmine flower, which he gives on page 182, are precisely the symptoms of a very contagious disease well known under the name of bee paralysis, which I have had in my apiary continuously for three years. He does not give all the symptoms, but those that he does give are unmistakable, and indicate clearly to my mind that he has in his apiary a disease for which no remedy has yet been found, and which, in my experience, is a worse foe to the success of the apiarist in the South than the dreaded foul brood. The attention of this gentleman is invited to the symptoms of bee paralysis, which are as follows: The first advent of an infected bee into a healthy colony is detected by the vigilant little guard bees, who will be seen pulling and hauling at the infected individual, striving with all their might to drag it from the hive, and gnawing it all over. The suspect in vain tries to appease the guard by offering the contents of the honey sac; she extends her proboscis at great length, and may be seen scraping it with her forefeet, but all to no purpose. The guards get on her back and gnaw her all over, and use their best efforts to get rid of her by every means short of using their stings. At the next stage the infected bees will be seen stripped of their hair, and showing a thorax of a bluish-black colour, which discoloration extends to the greater part of the abdomen. This loss of hair has been attributed by some to the effects of the disease, but a more careful observation has led me to believe that the bees gradually gnaw all the hair off of them. These hairless bees will now be seen to grow emaciated, some of them being shorter and more slender than natural. They then will be seen with tremulous wings shaking and quivering as though palsied. After a period more or less extended, the third stage is reached, when the hive is thoroughly infected and bees begin to appear at the entrance with their abdomens very much swollen and distended by thin yellow fæces, which they sometimes discharge, spotting the alighting-board with yellow splotches. The bees appear paralysed, and move with difficulty, while their wings exhibit a characteristic quivering movement that once seen can never be mistaken. They now die in the hive and in the morning they are dragged out by scores. Soon a heap of dead and rotting bees will accumulate in front of the affected hive, and a peculiar disagreeable odour will be noticed on lifting the hive cover. About this time the infection becomes so virulent that bees will begin to drop dead by thousands all about the apiary. Standing under a wild peach-tree in bloom at such a time, I have seen bees with no sign of the disease drop dead from the flowers. About and in front of the apiary, bees will be seen to fall with heavy loads of pollen, and to die instantly. All this happens, some years, during the height of the honey flow, and the apiarist feels tempted, after trying every remedy that he can hear of, to give up in disgust; but, as the warm nights come on, and the honey flow has passed, these symptoms moderate, and colonies that have not lost their queens begin to build up again, and by the middle of summer only an experienced eye will see any sign of the disease in most of the colonies. Perhaps one colony in twenty will persist in putting out a few swollen dead bees each morning, and will manifest the presence of the enemy every month in the year. This is bee paralysis as I have seen it for three years. It is much worse some years than others. And during all this time there will be a few colonies that do not show any signs of the disease at all. Now, if the writer above quoted were correct, and these effects followed the blooming of the yellow jasmine, why do not these signs appear in all the colonies? Why does one apiary show this mortality, and another, only a mile off, show nothing of it; and finally, if it is the jasmine flower that does this work, how is it that this whole series of effects appear in the North and West, where no yellow jasmine ever grows?

In our Southern climate, at least, it is important for the apiarist to be able to recognise

the disease when it first appears. He ought not to rest under the delusion that his bees are suffering from the consumption of the pollen of yellow jasmine or from any other poison, but as soon as the disease is observed, he ought to isolate the affected colony by moving it to a distance. And if he does not wish to take the radical measure of stopping the spread of it by killing out the bees, he ought at least to watch it carefully, and the moment the robber bees begin to assail the weakened community, he ought to make away with it at once, because, beyond all doubt, robber bees do carry the infection home with them.

There is no excuse for the length of this article except the importance of the subject, and my desire to prevent others from suffering the loss that has fallen to my lot, from not being able to recognise the disease at the outset.—T. S. FORD, *in Bee-keepers' Review* (American).

[The above article is interesting, though of less actual importance to bee-keepers in this country than in America. Bee paralysis—or, as it is sometimes termed, the "nameless bee disease," from the fact of its being long known to exist without having any special designation—is not by any means so prevalent or so evil in its effects among bees in this country. The curious part of it is that the malady usually breaks out in strong colonies, and sometimes cures itself without help on the part of the bee-keeper. The ordinary course taken to cure it is removal of the queen.—EDS. B.B.J.]

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column. Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** ERRATA.—In the reply to *Busy Bee* (page 489 of last issue), the word "spines" which appears on sixth and seventh lines should, in both cases, have been *species*.

GEO. WEBB (Swindon).—*Artificial Comb.*—1. A German manufacturer has invented a machine for making combs with full depth worker cells, but we don't think it is on the market for sale; nor would it be likely to help you if it could be bought, on account of its probable high price. 2. We should not advise transferring the bees from skeps to frame hive in February. It would neither be wise nor safe to do so.

DELROY (West Hartlepool).—*Bees as Incubators.*—1. For particulars as to exams. for experts' certificates write to the sec. of the B.B.K.A., Mr. Huckle, King's Langley, Herts. All that we know of arranging bee-hives as incubators appeared in our issue of October 18 last, to which please refer.

CASTLE HILL (Addington).—*Location for a Large Apiary.*—The proposal to keep a large number of hives with the view of making them a business success is too serious a one to entertain without full consideration of all the points involved. Nor have we sufficient personal knowledge of the districts round London to name a place likely to answer the purpose beyond saying that twenty to thirty miles away would be quite near enough to London, and fifty miles away would be better still. There are good districts in Kent for early or fruit honey, but white clover is rather scarce in that county. Sussex is better for clover, but not so good for fruit bloom, while for heather, Surrey is perhaps the best, but not very good at that. Your desire for "a good clover district with heather within reach" is one all bee-keepers share, but such places are not too plentiful, and we certainly know of none near London. Perhaps some reader located within thirty miles of town will give our correspondent the benefit of his views on the subject. It should be borne in mind, however, that keeping a few stocks of bees successfully is a very different affair to establishing a large apiary for profit, to do which only a location with the most favourable surroundings should be selected.

H. B. B. (Putney).—1. "The Guide Book," which may be had from this office for 1s. 8d. post-free, will furnish all the information desired. 2. Various kinds of hives are described and illustrated in the above, and you will be able to see those preferred by prominent and experienced bee-keepers, and judge for yourself as to the best. 3. Bees, if managed properly, may be kept without danger to young children or to any one.

W. SNELL (Eggersford).—*Bee Plants.*—1. The various Daphnes all produce more or less honey, but you do not say which kind is referred to. 2. There are also several varieties of Escallonias, Escallonia Macrantha being a special favourite with bees. 3. The word "Japonica" simply means Japanese, and is used as an affix to designate a Japanese flower or shrub, of which there are many kinds which produce honey. We must therefore have the full name before we can reply. It may, however, be stated generally that although the plants referred to produce honey they are not grown in sufficient quantity to be regarded as practically having any appreciable influence on the honey-crop in this country.

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USEFUL HINTS.

WEATHER.—Quite up to date of writing, dull, cold weather has been the rule; but, so far, we have experienced no winter as the term is usually understood. The bees, too, have been singularly quiet with us for several weeks now; more so than we have seen them during much colder seasons in the past. A good general "turn out" for a day would just now be a cheering sight to bee-keepers, and be very beneficial to the bees themselves, before settling down for a long spell indoors during the inevitable frost in front of us.

PROFIT FROM COMB-BUILDING. — A correspondent—who, when he writes, usually has something of interest to convey—offers a hint worth noting. He says:—

"Referring to the correspondence I have seen in the BEE JOURNAL as to what bees will do in the way of comb-building early in the year in south-eastern counties, could you not suggest a new source of profit to bee-keepers, viz., the building of combs on shallow-frames in the south-east to be sold to bee-keepers located in clover counties, and by them sent to heather districts for refilling, after the clover honey has been extracted?"

This is a chance of profit worth thinking out, and if frames of comb can be produced at a moderate price per dozen, it might develop a good and reliable trade between bee-keepers. It will, of course, be necessary for the "moor-man" to renew his heather combs each year, but he has a set-off in the value of the wax from the "pressed" combs. Combed sections might also be produced and sold in the same way with mutual advantage.

FOUL BROOD AND "COMPULSORY POWERS."—The interest taken in this dual question is, we are glad to see, finding expression in various directions, and the views of all who are interested will be of great service in elucidating what it is most desirable should be known. Several references to the subject will be found in our pages this week, and we hope to have still further information supplied, and discussion thereon. If correspondents located in what are known as foul-broody districts would but send on particulars of the hardships suffered, and the injustice done them through the immunity with which diseased, and consequently valueless, stocks of bees may now be kept, in spite of the protests of those injured, it would do much in directing the "policy" of the future.

We trust the fact will not be overlooked that, so far as the influence of the BRITISH BEE JOURNAL goes, injustice to none will be advocated, the cottager claiming from us a specially large share of consideration. But what sense of reason or justice is there in whole districts of some counties being regarded with suspicion, and the value of stocks and swarms *for sale purposes* very materially lessened—to go no further—just because there are neighbouring apiaries where neglect and consequent disease is known to exist? What about the injustice to those who do their very utmost to keep their bees clean and in good health, and yet have their efforts paralysed in the way indicated? Whatever is done will, we trust, be done well, and no bee-keeper—be he cottager or otherwise—will need to fear any wrong being done him, because none but diseased stocks would be destroyed, and such stocks are of no value to any one. If this is denied, let us ask, firstly, who among us, who is "wise," would set down a foul broody stock among his healthy bees if it was offered him as a gift; and, second, what but compulsory powers can be of any avail in such cases as have been and are being described in our columns?

It is an interesting and curious coincidence to note how our bee-keeping brethren on the opposite side of the globe are—not without good reason, we may be sure—taking action concurrently with ourselves on the same question, and much on the same lines; for we just learn that a special meeting of the council of the National Bee-keepers' Association was held at the Technical College, Sydney, for the purpose of drafting a bill to be introduced into Parliament to deal with foul brood and other diseases in bees. The acts in force in New Zealand and South Australia were considered seriatim, and several amendments were made with a view to

meeting local requirements. It was decided that the measure should be intituled the Contagious Diseases Among Bees Act; that under it inspectors, who should be bee experts, should be appointed. A deputation was appointed to wait upon the Minister for Mines and Agriculture for the purpose of requesting him to introduce the bill.

BEES AND RED CLOVER.—The same agency which reports the above action of bee-keepers in Australia also sends a suggestive bit of news bearing upon the question of the supposed capability of the Ligurian bee in fertilising red clover, an office which, owing to some fable as to its *shorter tongue*, the common brown or black bee is considered by some to be incapable of fulfilling. Here is what the *Sydney Mail* says:—

"With a view to perpetuating red clover in the colony, the New South Wales Agricultural Department has imported from New Zealand a number of bumble-bees, which are the only insects which readily fertilise red clover and enable it to seed freely. The bumble-bee was acclimatised in New Zealand some years ago, after much trouble and expense, with the result that red clover has been made permanent there."

Now the point of the above lies in the fact that Ligurian bees were taken over to New Zealand in large numbers some years ago to fertilise red clover, and so render unnecessary the importation of seed to the colony. But after exhaustive trials they had to fall back upon our old friend the British *Bombus*, or bumble-bee, which is now being carried over to Australia to do what no hive bee can do, viz., fertilise red clover, as we have all along maintained.

IRISH BEE-KEEPERS' ASSOCIATION.

GOVERNMENT AID FOR THE IMPROVEMENT OF APICULTURE IN IRELAND.

The committee met on the 4th inst., Dr. Traill in the chair. A letter was read from the Agricultural Department of the Land Commission, stating that the Congested Districts Board are prepared to grant £200 for the improvement of apiculture in their districts during 1895, provided that a satisfactory scheme for the proper expenditure of that sum is submitted to and approved by them. The letter also contained suggestions for such a scheme, which were carefully considered, and it is hoped that satisfactory results may be hereafter reported.

Messrs. Edmondson Bros., of 10, Dame-street, Dublin, having kindly offered to receive subscriptions for the association, it was resolved that subscriptions may be paid either to them or to the hon. sec. and treasurer, Mr. Chevenix, 15, Morehampton-road, Dublin.

HONEY IMPORTS.

The total value of honey imported into the United Kingdom during the month of November, 1894, was £766.—*From a return furnished by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C." All business communications relating to Advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office, 17, King William-street, Strand, London, W.C." (see 1st page of advertisements).*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

NOTES BY THE WAY.

[2129.] Here we are in the middle of December, and the weather still open and mild; in fact, the past fortnight, since the heavy rains, nas been almost spring-like. We are situated on the hills, so that we suffered no inconvenience from the water after the rains were over, though I have heard of some bee-keepers living in the Thames valley whose bees have perished by drowning in the floods.

I notice our "Editorial" of last week was on the compulsory powers which may possibly in the near future be placed in the hands of, shall I say "foul-brood inspectors"? The noisome pest requires putting down, but if our craft is advanced enough to require the strong arm of the law to regulate the matter is another question. The law will deal hardest with the poorest in this as in other matters—as in swine-fever, for instance, the poor man's one little pig is slaughtered; it is his all. So with the little apiary of the poor cottager, when that is condemned to the fire it will be his all, and the law that does not render him full compensation will not deal justly with the man (at least in my opinion). This raises other thoughts. What of Blow's new remedy for foul brood? (*vide* the outside front page of B.J.) *numerous unsolicited testimonials*—in italics; this, I take it, signifies that the remedy has proved a remedy in the hands of his customers. I have not seen the solution known as "The New

Remedy," but in a communication a few weeks back Mr. Blow enclosed what is evidently a label used on his bottles. It reads, "Mix 1 oz. of the solution to 12 pints of syrup;" in severe cases double the quantity may be used, then it may be advantageously used for spraying the combs, scrubbing out the hives—likewise stating that usually a perfect cure results within one month. If this statement can be borne out by bee-keepers, who have had the disease and applied the remedy, we are within measurable distance of a clearance of the pest without the destructive and impoverishing element, fire! By resorting to open-air feeding, the remedy can be easily fed to all the bees in the neighbourhood by using very thin syrup and the double quantity as recommended, also by giving the remedy to the poorer members of the craft, or preparing their bee-food for them, they finding the sugar and remaining while the food is prepared. Some thirty to forty years ago bee-stealing was common around this district, more than one tale I have heard of how the robbers got a severe stinging and thus disclosed their identity. Also how one cottager robbed another of his bees, stool and all, to replace a stock that had died, and then in the spring, the thief asking the cottager, whom he had robbed, to "come in and have a look at one of his stocks which did not seem to work like the rest," and, behold! on the stool was the very plate with which the robbed cottager had fed his bees early in the autumn, and had forgotten to remove it! The said plate was a special pattern in the pottery art. This "spotted" the thief at once. While on this subject, I may say that I have had my doubts of the super-clearer proving an unmixed blessing to bee-keepers, from the very fact that it places our produce in the best possible form and place for a thief. As a guard against the marauder, it will be well to be fore-armed. Place them on in the morning and remove your honey in the evening to a place of security greater than an easily-opened hive, often as far removed from the habitation of the apiarist as is practical—in some out-of-the-way corner of the garden.

I should be the last to say a word in favour of poor or bad honey being put on the market, but possibly the honey purchased by "Working Bee" (2123, p. 482) was honey that had been overheated. The cork, if a tight-fitting one, is far more preferable than a screw-cap and a thin disk of cork inside. There are so many grades, and qualities, and flavours in honey, depending principally on the source from which it is gathered, secondly, on the method of storage and place in which it is stored, and somewhat on the cleanliness of the operator and his utensils used in handling and storing. The reducing of honey in a crystallised state in a large tin to the consistency required to get it into small bottles needs care and practical supervision during the melting, or the flavour is lost, and a burnt-sugar flavour is imparted—I term it a "cooked flavour." This reduces the value considerably in the hands of any purveyor who knows what good honey is; therefore, I should always advise bee-keepers in a small way, who have no facilities for dealing with bulk, to put their honey into the size packages their trade demands early in the season before granulation begins, and store same in a dry place till wanted for their customers.

I am glad to hear self-hivers have been successful; may the inventors improve them till they are perfect. What I have always contended is that if they will keep the colony of bees together during the absence of the bee-keeper, they will have proved a great help. No doubt the queen trap will do this, but that precludes the swarm from clustering with the queen if they are so inclined, therefore the self-hiver is an advance on the queen trap, even if is only an enlarged trap.—W. Woodley, *Beedon, Newbury.*

DOUBLE *V.* SINGLE-QUEENED HIVES.

MR. WELLS' REPORT OF SEASON '94.

[2130.] The report of my bee-doings for the year 1894 is, as usual, late, partly owing this time to want of time, and, for the rest, through delay in collecting particulars from the different apiaries in my own immediate neighbourhood, as I consider that my report would be of small value with the doings of my neighbours left out. In fact, comparison between the different methods of working bees in one and the same locality is in my mind the all-important question. Most of your readers are no doubt aware that '94 has been about as bad a season for bees in Kent as the worst on record; that being so, they will not be surprised at my short crop this year. I do not complain; yet it is short in comparison with other years since I have adopted the two-queen system. It must not be supposed that all bee-keepers in my own district have been converted into "Wellsites," as it is far from that; at the same time, I have met with sufficient encouragement to make me continue to advocate my present plan of working bees. But, as I have so often said, it is of no use for persons to think that they can succeed with my plan by simply putting two queens into one hive, and leave them to do just as they like afterwards. In that case they might almost as well stick to the old straw skep. We have some in this district who will hear of nothing but the skep as a bee-hive; moreover, they declare that honey from skeps is stronger and better than that taken from frame-hives. One bee-keeper of my acquaintance bought two frame-hives, which were prepared and stocked for him with swarms from his own skeps. These two hives were managed for their owner free of cost for several years. He was always very pleased with the beautiful lots of honey taken and handed over to him, and returned

thanks for labour bestowed on the bees and hives (thanks being all that was expected or required), yet he would do nothing for these frame-hives himself, but simply left them to manage themselves, and, of course, in time they were bee-less and empty. He now uses nothing but straw skeps, and I quite commend him for so doing, a skep being the only suitable hive for such bee-keepers. But I am getting wide of the subject, so to return to my report.

In the spring of this year I resolved to have only eight double-queened stocks instead of ten (of course I have no single stocks) as I began to fear that my neighbourhood was rather over-stocked with bees for so poor a district for honey. The weather also was bad during the fruit blooming season, and I got but little from that source. The next thing we depend upon in rotation is trefoil clover, of which there was a very fair lot grown this year; but it is mostly cut too soon for the bees to take full advantage of it, and as the weather continued unfavourable very little was gathered from that. Then follows about twenty acres of sainfoin, growing a mile or so from my apiary; but this, unfortunately, is usually cut before it gets in full bloom, much to the regret of us bee-keepers; still, the bees worked well on it for three or four days. We have no white clover about, and I know of but a single lime-tree, located nearly half-a-mile away. After this there is very little forage from which surplus honey is to be got. I grow, however, some "Chapman honey-plant," borage, melli-lotus, and hepieter mussura, to maintain a little bloom, and keep the bees in good breeding trim as long as desirable.

I cannot tell you what has been taken from my best nor my worst hive, not having kept a separate account of them; but there was not much choice, all yielding pretty even in quantity. I had two swarms, and by utilising the queen-cells and making nuclei I am well supplied with young queens. Not finding much demand for section honey, I work mostly for extracted, and from my eight hives I took 72 1-lb. sections and 524 lb. of extracted honey, making a total of 596 lb., together with 24 lb. of wax.

The above figures give an average of 74½ lb. of honey, and just 3 lb. of beeswax per hive (most of the honey is sold). My financial position in account with the bees for this year (1894) is as under:—

72 1-lb sections comb honey, at 11d. each	£3	6	0
524 lb. extracted honey, at 8½d. ...	18	11	2
24 lbs. beeswax, at 2s.	2	8	0
Total	24	5	2
Deduct expenditure during the year	4	9	0
Balance for labour ...	£19	16	2

Showing the net profit to be a fraction over £2. 9s. 6d. per hive. I have also four strong nuclei with young queens, all of which I am wintering in one hive, with the thin, soft wood, perforated-dummy between each lot. These may be useful in the spring in case of the loss of queens during the winter months, which bee-keepers are always subject to. I think, Messrs. Editors, you will agree that I have done fairly well with my bees this year, taking all things into consideration.

Anyway, it is a plain statement of my own bee-doings for this year, and I have endeavoured to make it perfectly accurate. I will now give you particulars of some of my neighbours' doings in bee-keeping.

The first—which I will call No. 1—is a skeppist, and lives about a quarter of a mile from me, and that much nearer to the sainfoin. In the spring he had four stocks, and during the summer got six swarms. At end of the season he declared he would only feed three of his ten skeps, so I bumped the other seven for him, and he got about 6 lb. of honey from the lot—certainly less than 1 lb. per skep. I gave the three skeps—which it was decided to keep, and which had 5 lb. of stores—10 lb. of soft candy pushed between their combs, as it was too late in the season to give syrup. The owner may get about 2 lb. of wax from the combs taken from the skeps which were bumped. I also found light cases of foul brood among his stocks.

No. 2 apiary is nearly close to No. 1. The owner had in the spring but one frame-hive (no skeps), and the bees being affected with foul brood died out about Michaelmas time.

No. 3 is about one mile away from me, and his bees are only separated from the 20 acres of sanfoin by the road; he is also a skeppist, and started the year with four skeps, from which he had five swarms. At the proper time I bumped five skeps for him, all healthy lots; I estimated his honey at 7 lb. per skep. He has gone into winter quarters with four stocks.

No. 4 began with three frame-hives, and during the season took 20 1-lb. sections of comb honey (no extracted); had to feed 30 lb. sugar, got two swarms, and has five stocks for winter.

No. 5, one frame-hive (no skeps), no honey taken, had one swarm, fed 10 lb. sugar, and is wintering two stocks.

No. 6 began with one frame-hive, took 21 1-lb. sections of honey, no swarms, no feeding, and no increase.

No. 7, one frame-hive, no honey taken, one swarm, fed 30 lb. sugar, and has two stocks for winter.

No. 8 began with two stocks in frame-hives, 21 1-lb. sections taken, no swarms, fed 20 lb. sugar, no increase.

No. 9, apiary, spring count, six frame-hives, took 15 1-lb. sections, no swarms, no feeding, lost one stock through foul brood, five stocks.

No 10 had in spring three frame-hives, 12 1-lb. sections taken, some feeding required; winters three stocks.

No. 11 began with two frame-hives, no honey taken, feeding required, no increase.

It will be seen that twelve skeps have been "taken up" for honey, and that they produced among them 41 lb., an average of nearly 3½ lb. each, but 10 lb. of sugar has been given to the skeps now in stock, an average of 1¼ lb. each. I have also dealt with twenty frame-hives—all single-queened stocks—from which 89 lb. of surplus honey has been taken, being an average of nearly 4½ lb. per hive. But 90 lb. of sugar had to be given as food for the bees, an average of just 4½ lb. per hive, or a trifle above the amount of honey taken. Much more food will also be required to keep them alive until the honey flow commences next year.

There are several more apiaries near me, but the information obtainable is not very reliable, no account having been kept. But I have good reason to believe that they have done no better than their neighbours. I am also sorry to say that in one of these apiaries—with four stocks in frame-hives—the bees were drowned in the recent floods. There are also reasons to fear that many of the above are affected with foul brood. The above account of my neighbours' bee-doings may be considered very brief, but it is sufficient for a comparison between the different ways of working bees, both in skeps and in frame-hives, with but one queen in each of them, and those in frame-hives with two queens in each hive. I have received several letters from bee-keepers in which they state that the difference between their single and their double-queened stocks is greater than those shown here, though I have no authority to make them public; but if the writers would report direct to the BEE JOURNAL, I, for one, should be very pleased to see it in print. I have purposely omitted names, &c., of owners of the apiaries enumerated above, but in case any of your readers would care to test the fairness or accuracy of the statements made, I will be very pleased to furnish names, &c., on being told the number of the case they would like to inquire into.

I must not omit to say that I have also had to give my bees 192 lb. of sugar to make them safe till spring, the cost of which is, of course, included in my year's expenditure. I think the above account gives another proof that a hive with two queens in it, if properly managed, will pay much better than either skeps or frame-hives with but one queen in each.

With the season's best wishes to all bee-keepers, and hopes for a successful 1895.—G. WELLS, *Aylesford, Kent, December* 10.

AMONG THE BEES.

SELF-HIVERS—MISSING CONTRIBUTORS.

[2131.] Thank goodness! I am free from Parish Councils (I believe I have got P.C. stamped indelibly on my brain in large capitals) just for a few days until that momentous question—the poll—comes before the excited electorate of this my parish. Not until to-day have I had time to scan the pages of the last two issues of the B.B.J., and in the latest I notice Mr. G. W. Hole's letter (2125, p. 483) *re* self-hivers. Now, directly I read it, I hunted up the numbers of the B.B.J. referred to, and found those two letters of his, which ought, in all conscience, to have created quite a furore in the bee-keeping world. Three swarms, and each of them hived themselves quite nicely! Well, that's what I call—and everybody else, I should think—a first-class percentage of successes, and ought to be chronicled in big letters.

Now, friend Hole, What's the self-hiver like? Is it expensive to make? Is it simple? If you can answer these two latter questions in the affirmative just you patent it, or you will find yourself situated as I have been quite a few times before; that is, others will reap the fruits of your genius. This is rather selfish talk on my part, but it seems to have become inculcated into my system by experience.

It is very kind of you to offer me a "photo" of the swarm in the hiver. I should very much like to have one, and so will thank you in anticipation.

Now, during the winter months is the time to study those devices which have proved themselves of worth during the past season. This brings me to observe that I have noticed how the communications in the B.B.J.—in fact, in all other bee journals, British and foreign—lack somewhat during the dark months of right down attractive matter in the correspondence department, such as this question of self-hivers. Why cannot our bee-keeping friends hunt up a few experiences over which we can have a little "argufying," which, when properly conducted, is sure to bring edification. Now, do try, some of you amateurs, to tell us "professionals" something that we do not know—or that you think we do not know. Excuse the latter little bit of apparent self-assurance; it's not meant to be in the least assumptive.

But to return to self-hivers. Of course everyone knows the "Alley drone-trap"; this, I think, was the first step towards a presumed solution of the self-hiving difficulty. I suppose that is somewhat of the plan of Mr. Hole's self-hiver—the principle being to have the entrance to hive covered with a box of excluder zinc, from which the workers can escape, but the mother-bee cannot, a way being left for her to go into another compartment, with the expectation of the swarm following. Most of these contrivances have been failures, so there must be something different in Mr. Hole's hiver. Well, after he has protected it, I hope he will let me see one. I will then try it in my home apiary, and, as I run over seventy colonies in that apiary, most of them are never supered, it will have plenty of work cut out for it.

"Amateur Expert."—Welcome again to these columns. But don't let it stop at just one "show" before the curtain! The footlights are turned up full bright, and the audience packed from pit to "gods." It seems but yesterday, though now some years ago, that you and I were one sunny day just about this time of the year watching the flight of bees from your hives in that pretty village home of yours in ——shire. I seem "a bit lonesome like." Where is "R. A. H. G." and his close connection "Xtractor"? Where is the "thin-walled-hive" bee-keeper in south-east Yorks, and the big bee-keeper in Glamorganshire? Silent! Well, I suppose it's the way of the world—the young ones come forward and "crowd out" the old un's. When will it be my turn?—W. B. Webster, *Binfield, Berks, December* 10.

BEE ASSOCIATIONS.

HOW TO MAKE THEM SUCCEED.

[2132.] Referring to 2128, p. 484, in last issue, I apologise for my mistake and thank Mr. Rowell for his correction. I have now, fortunately, been able to refer to the "Hants and Isle of Wight B.K.A. Report for 1892," and there I see Mr. Rowell's name among the subscribers, but comparatively few Hants bee-keepers follow his good example—few, I mean, considering the richness of the county as a field for bee-keeping and as a field for funds. Subscriptions in 1892 were under £20, plus £2. 10s. 9d. contribution from a branch run by a separate committee at Swanmore, collecting and dispensing about £10 of its own local subscriptions. I venture to suggest an amalgamation of the two committees, presided over by an energetic bee-keeper as sole secretary at a central or accessible part of the county. Hon. local secretaries should be added in the parishes as fast as the opportunities occur. I do not see *a single subscriber* in the Isle of Wight, nor any record of operations there, so that the words "Isle of Wight" could be well dispensed with. "The Hampshire B.K.A." would be far the best title, and fit with the rest of the counties. I subscribe 5s. a year to my County (Kent) Association, and receive gratis (amongst other privileges) on the first of every month a copy of the Record—with a special cover containing Kent news (*i.e.*, bee-keeping news of the county), as do also 350 other subscribers. Some 4,000 copies of their monthly Bee Records have been thus posted to members gratis this year. Our secretary tells us that we have 100 more subscribers than we had last year, and he hopes to get 100 more in 1895, thus making distinct advances every year. I admire his hopefulness, for it is utterly impossible in the present day to expect progress (whether it be a B.K.A. or any other "A") unless the thing is conducted with zeal on strictly business principles. In other words, as a good tradesman would conduct his business—he *must* "push" in order to progress. I do hope that the "Hampshire B.K.A." will reap abundantly from the grand opportunity which will be afforded next year in the visit of the "Royal Counties" to Bournemouth. I also hope Mr. Rowell will accept my criticisms in good part. I thank him sincerely for his.—Kent Bee-Keeper.

COUNTY ASSOCIATION LABELS

AND GLUCOSE SELLING.

[2133.] I believe the Berks is the nearest county association using an official label to your correspondent, "A Working Bee" (2123, p. 482). Should it be one of our labels on the bottle to which he refers, I shall esteem it a favour if he will ascertain the number on the label, or, better, send me a bottle of the (query) glucose, and I shall be pleased to repay him any expense he is put to in the matter, as we have the means of tracing the guilty person, and we shall at once take steps to bring such an one to justice.

I agree with our Editors that it would have served the cause better if your correspondent had put himself in communication with the secretary of the association to which the label belongs, and thereby helped to gain the object for which they are issued, viz., to establish a higher standard of taste for honey by bringing only the best qualities of the British product before the public, and thus excluding indifferent foreign and adulterated samples, and in so doing to develop the trade for pure British honey. I trust, therefore, "A Working Bee" will help us in our efforts by furnishing further particulars. In asking this favour, I feel sure I am voicing the wishes of my brother secretaries who are working on similar lines.—A. D. Woodley, Hon. Sec., Berks B.K.A., *Market-place, Reading, December* 10.

RE-QUEENING HIVES.

IS IT NECESSARY?

[2134.] I write to endorse the request made by Mr. Knewstubb in the B.B.J. [2124], p. 483, that some of our leading apiarians should give their opinions on the important subject of re-queening. The elaborate methods of queen-rearing so often described hardly meet the needs of those whose apiary is limited to a few stocks. I have repeatedly found that by substituting a bought queen for an old one expectations have not been realised, as she has turned out very indifferently. On the other hand, I have often found a stock from which I expected little, owing to the supposed age of the queen, has turned out splendidly through having re-queened themselves without my knowledge.

Sometimes, when a swarm has issued whose queen on inspection has appeared old, I have killed her, and let the swarm return, thus

obtaining, in the course of a few days, a larger swarm with a virgin queen. I have also divided a stock, six days after it has swarmed, with a "Wells" dummy (leaving, of course, some queen-cells on each side of it), removed the stock to a distance, and placed the swarm in its place. In this case two strong nuclei are at once obtained. Should one queen fail in mating, she may be removed, the dummy taken out, and there is still a good stock. Should both queens mate, one may be removed on its comb to supplant the old one in the swarm, or the two lots may be left to winter together, to be separated in the spring to form two colonies, or to stock a "Wells" hive.

I should be glad to hear of any better methods of keeping up a stock of young queens with ease and simplicity.—H. M. S., *Bridgnorth, December* 7.

FOUL BROOD AND COMPULSORY POWERS.

MOUNTING MICROSCOPIC SLIDES.

[2135.] Respecting your recent leaders on the subject of foul brood, I may mention a case in which the compulsory powers you advocate would be of great assistance.

This autumn, I, as local secretary of the county association, paid several visits to bee-keepers in my district, in company with our expert.

In one village, where I have only a single member, we found that he had a stock in a skep very badly infected, which he wisely burnt at once on our recommendation. We inquired if there were any more bee-keepers near, and were told of one a few hundred yards away. We called on this man—a cobbler—and offered to examine his hives gratis, and, if found diseased, to give him "advice and medicine," also gratis. The cobbler was exceedingly rude, and ended by refusing to allow us to enter his garden.

We gathered from his conversation that even if he had no foul brood now he had had it some time, for he said he "knew the smell," but that there was no smell about them now.

Here is a man whose "pigheadedness" makes him blind to his own advantages, and a danger to every bee-keeper for miles round.

Could you oblige me with any information as regards the method of making and mounting a series of microscopic slides of the various parts of the bee, sections or otherwise? Is there any work on the subject, or is there any place where I could see and examine such slides for my guidance, so that I could make a set for myself? I have tried, and failed. For one thing, I found such parts as the wings, tongue, &c., were covered with minute air-bubbles, which I could not get rid of when mounted in Canada balsaam.

I have all the necessary apparatus, though I think I need a lower-power objective. I have a 1-in., $\frac{1}{10}$-in., and $\frac{1}{8}$-in. Even the 1-in., however, will not take in all a wing, for instance.

Again, how can the several parts of the sting be demonstrated? I could not separate them, and only on careful focussing with the high power could I just make out the barbs.

I wish, if possible, to obtain a series of photographs from the slides, and any help you can give will greatly oblige.—PERCY SHARP, L.R.C.P., &c., *Brant-Broughton, Newark-on-Trent, December* 10.

[Our correspondent will find very full and complete instructions for mounting microscopic slides in the series of "Bee Papers for Winter Reading," which appeared in our pages a year or two ago. The numbers referred to may still be had from this office.—EDS.]

APIS DORSATA AND EGYPTIAN BEES.

[2136.] I have just received the B.B.J.s of November 8 and 15, the former containing my letter (2107, p. 446), and the latter a lengthy reply from Mr. Baldensperger (2114, p. 455). In my letter I related my experiences here, and said that they led me to offer a suggestion. A natural inability to express myself intelligibly, and the fact of the letter having been written in March last—put aside as being of no interest—and then forwarded in October, has led Mr. Baldensperger into the "mix" he is good enough to say I was in. A second glance at my letter will show that I was never under the impression that I had the *Apis dorsata* to deal with, besides which, the "&c." on page 3 of Mr. Cowan's work, "The Honey Bee," at once translated itself to me as meaning Nahhl Beladi and Nahhl Shami (the country bee and the Syrian bee); the illustration was referred to only to give me reasonable grounds for making the suggestion I did, and not as an argument in favour of the theory that the bees I am the happy possessor of were a species of dorsata.

The third paragraph of Mr. Baldensperger's letter is written under two false impressions. The first, that I was under the impression myself that my fifty "W. B. C." hives contained apis dorsata, and the second that the incidents I related took place at the end of the year, while, as a matter of fact, they took place in the month of March last, when orange, lemon, berseem (clover), and some hundreds of thousands of fruit trees were in bloom, so that all Mr. Baldensperger's theories of hunger and vagabond swarms fall to the ground. Having made this explanation, I think the readers of the BRITISH BEE JOURNAL will admit that my experiences were of some little interest to me, and may be to them, while it gives Mr. Baldensperger an opportunity of explaining the matter when seen in this new light.

I cannot hold myself responsible for the misquotation of the number of colonies secured yb Mr. Benton; I gained my information from a

correspondent's letter in the RECORD, nor do I think that the phrases and meaning implied in paragraph 3 of Mr. Baldensperger's letter, commencing "Mr. Benton is enough of a bee expert," &c., are altogether in good taste. Nothing was further from my intention than to pose as an authority on such a subject, or imply that Mr. Benton was not only perfectly aware of the few points I mentioned, but far more.

Of the second to last paragraphs of Mr. Baldensperger's I am at a loss to make out what he is driving at. I certainly mentioned about the observatory hive incident, but only to say that I thought that the fact of the bees absconding should not be accepted as conclusive of their aversion to work in a hive. My bees are located in "W.B.C." hives, and it may be as interesting to B.B.J. readers, as it will be gratifying to Mr. W. Broughton Carr himself, to learn that five of these hives—unpainted—have stood in the garden since August, 1893, exposed to the "fearful rays of the sun," and both hives and colonies are in perfect condition. I have been resident in Egypt about eight years now, but last year I learned from "L'Apiculteur" many things I had not known previously; and I now learn that Sheikh Moustapha of El Bakara—*the* bee-keeper of the village mentioned by Mr. Baldensperger—has got ahead of us in preventing swarming. I am afraid that after my visit to the place similar modifications will have to be made in the information given to Mr. Baldensperger during his flying visit to Egypt, and which he now retails, as were made in one of the local journals in consequence of his article which appeared in "L'Apiculteur."—A. C., *Government Apiary, Guizeh, Egypt, November* 24, 1894.

Queries and Replies.

[1219.] *Transferring Bees in Winter—Thickness of "Wells" Division-boards.*—I should be much obliged if you would answer me the following, as I am only a beginner with bees this year:—1. I have the chance of buying two lots of bees in hives ready packed for winter, but do not want the hives as I have a "Wells" hive empty, which I have just had made, also a "W. B. C." of Redshaw's make (new). Could the bees be transferred at this time of year into the "Wells" hive? I have had a small shed, 6 ft. by 4 ft. 6 in., put up, in which I keep my present two stocks, and can heat same with oil-stove, and in which I have room for the "Wells" hive and two ordinaries in single row, and have height for another row. 2. Can you inform me if the division-board of "Wells" hive should be more than $\frac{3}{16}$ in. thick? The present one is made of mahogany, and is that thickness, but I am afraid it will warp.—R. H. COLTMAN.

REPLY.—1. If the transferring of bees and combs is to be done by an entirely inexperienced hand, it will be preferable to defer the operation till a warm day when bees are flying freely. Otherwise the task is not at all a difficult one to a bee-keeper of ordinary skill. The main point is to avoid injuring the queen during removal. Our correspondent refers to being able to heat his bee-shed with an oil-stove, but we must remind him of the inadvisability of using artificial heat for bees in winter. 2. The perforated division-board used by Mr. Wells is only about $\frac{1}{8}$-in. thick, but he binds it with tin, to prevent fracture and assist in keeping the wood from warping.

[1220.] *Bees Flying in Winter.*—I came into possession of five lots of bees the last week of October, and found in each hive not more than one pound of stores; so I made some soft candy and put on each, and since that time I have observed the bees seeking for water, although the thermometer has been nearly to freezing point. Some days I have noticed two to three dozen bees licking the water drippings on the greenhouse. Is there anything unnatural in their so doing under the circumstances? I am afraid they have started breeding again. My bees in another part of the garden, although more exposed to the sun, are scarcely ever on the wing when the others are out quite lively. Do you think that bees so short of natural stores will winter on soft candy? or would you advise taking them into the greenhouse, and giving them some warm syrup for a few days. Thanking you in anticipation, T. J., *Bristol, December* 8.

REPLY.—If the bees are seen to be taking the candy freely, it will be best to do nothing beyond keeping up the supply regularly, as it is consumed. Bees frequently do well on candy alone if they are found to take it freely. No alarm need be felt as to breeding.

[1221.] *Drones in Hives in Winter.*—Will you kindly give me your opinion on the following?—I happened to be standing looking at my hives on November 25 last, and, the day being fine, the bees were out for a fly; to my surprise, a drone came out of one, and, after a fly round, returned to the hive. Having read that drones in winter was a sign of queenlessness, I examined the hive on November 29 and found queen all right. I also saw a few drones moving about among the bees. I shut down this hive for the winter about the end of September, and there was then no brood in it. What does this indicate, and is it not very uncommon at this time of the year?—D. SILVER, *Roseneath, Dumbartonshire, December* 7.

REPLY.—Drones in hives at this season may arise from several causes not clearly definable without inspection of the combs. One thing, however, is certain, viz., the queen at present in the hive is a drone-breeder, and consequently worthless.

[1222.] *What is Honey?*—Will you kindly tell me in your next issue of BEE JOURNAL what honey is really composed of, and which of the two—*butter* or *honey*—is the most *beneficial* as a *food?* I think that all bee-keepers recommending honey for household purposes ought to know this.—JAS. SEEL, *Manchester, December* 8.

REPLY.—Honey is composed of the sweet nectar exuded by certain flowers, and gathered therefrom by bees. We don't quite know if our correspondent's query is intended to ascertain the component parts of honey from the chemical standpoint; but it would certainly not assist sales to inform buyers what proportions of oxygen, hydrogen, and carbon are embodied in it. It is more beneficial than butter as food for children, because of its readily assimilating with whatever food is partaken of along with it.

FEEDING BEES.

HOW IT IS DONE AT DR. C. C. MILLER'S APIARY.

Usually I have dreaded the time to come when I knew we should have to feed our bees. Nearly every thing about the house would be sticky, door-knobs included, to say nothing about the amount of work involved. But this year it has just been "fun"—not one bit of mess about the house. I have thought so many times, while we were feeding this year, "Oh, how much extra work we have made for ourselves in former years, all for not knowing how!" Then I wondered if we were doing as much hard work in other directions just because we did not know how, and if that were the reason that bee-keeping was such hard work.

I'm going to tell just what we did this year. About September 1 we visited each apiary, and weighed each hive to find out just how much feed each colony would need for winter. Just the hive and contents with cover were weighed, without the bottom-board. Under the record of each hive in the record-book the weight was put down. These weights varied from 26 to 62 lb. Some colonies had more than one story, but only the weight of the upper story was taken.

If a colony weighed 47 lb., it passed muster without feeding; but if it weighed less than 47 lb., it was given sugar enough so that, when the sugar was brought to the consistency of honey, the total weight was brought to 50 lb., figuring on the basis that 5 lb. of sugar make 7 lb. of syrup of the consistency of honey. That is, 5 lb. of sugar were given for every 7 lb. the colony lacked of weighing 50 lb. For example, a colony that weighed 36 lb. had 10 lb. of sugar given it.

We next brought out our Miller feeders, and stuffed the opening where the feed goes through (which in the original Miller feeder is ¼ in. or more), with cotton cloth. Old pieces of cotton flannel and part of an old bed-spread were what we happened to have handy to use for the purpose; and, when properly packed, they worked tip-top. I was the one who did the packing; and, when most of them were packed, Dr. Miller thought I was packing them too tight. So I packed the rest much looser.

We fed the Hastings apiary first. We took along twenty-four feeders and three bags of sugar weighing 100 lb. each. We also took along a tin pail holding 11 lb. of sugar, another holding 4 lb., a can holding 3 lb, and another holding 1 lb. With these we could quickly measure the right quantity of sugar for each colony.

The first thing after reaching the apiary, we put on the feeders, leaving the covers off; and into each feeder the proper amount of dry sugar was put, the feeders being still left uncovered. After all the feeders were supplied with sugar, we poured on a pint of water to each pound of sugar, put the covers on, and came home.

The ones that were packed first were all right, with the exception of one or two which, after being used for a while, swelled so that the syrup would not pass through. The second lot—those that were not packed so tightly—let the water through too fast, and left dry sugar, and more water had to be added two or three times, so that some of them had two or three pints of water for every pound of sugar.

We fed in all about 1,500 lb. of sugar; and I can hardly realise that we have fed it, it has been so easily done. Just try it for yourselves, and see how nicely it works.—EMMA WILSON in *Gleanings*.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

ERNEST F. TALBOT (Cornwall). — *Selecting Hives.*—When asked for our individual opinion as to the best hive to use, we find ourselves in a difficulty which is further increased by the unfortunate (or fortunate) fact that two well-known hives are named respectively after the editors of this journal, viz., the "Cowan hive" and "W. B. C." hive. Now, although these hives illustrate our respective personal preferences, it does not follow that they are by any means "the best" in the opinion of all bee-keepers. We, therefore, advise our correspondent to procure catalogues from one or two of our advertisers—wherein are illustrated both the hives referred to, along with other good ones—and select for himself.

W. B. GARNETT.—Honey received, though possessing an excellent aroma, certainly tastes very strongly of sugar syrup. More than this could not be safely said without analysis.

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King William St., Strand, London, W.C.

Editorial, Notices, &c.

THE FOUL BROOD QUESTION.

WHAT THE "STANDARD" SAYS.

It cannot be otherwise than gratifying to those who are interesting themselves in the question of obtaining Government aid in suppressing foul brood among bees, when a whole column of so important and influential a journal as the *Standard* is devoted to the subject, as was the case in a recent issue of that paper. Our gratification is still further increased by the tone of entire approval of the objects aimed at, and the powers sought for by bee-keepers, pervading the article referred to. And it may be safely inferred that the views expressed will carry more or less weight in the right quarter when the occasion arises. Once the justice of the claim for protection put forward by bee-keepers is admitted by the Board of Agriculture, the fact of its directly affecting a large class—for whom very proper sympathy is just now felt by both great Parties in the State—viz., the agricultural labourer, we may be quite sure of obtaining a hearing and fair consideration from the powers that be, regarding the eventual removal of any injustice or real hardship the said classes are proved to be suffering under. We print below the more important portions of the article in the *Standard* of the 15th inst., omitting such descriptive details as readers of the BEE JOURNAL are already fully conversant with. Our contemporary says:—

The subject which a deputation of British beekeepers is about to bring before the Board of Agriculture, though not of momentous importance, nevertheless affects the pockets and interest of a vast number of people, among whom are comprised many of the most industrious members of the working class. A well-known agriculturist used to chaff his brother farmers by showing that he could make more out of one good queen bee than they could out of the best shorthorn, and certainly to a cottager the hive is quite as important as the pig. The improvement of the appliances, the spread of technical instruction, and the encouragement offered by County Councils have, during recent years, given a very strong impetus to the industry, and produced a great increase in the number of beekeepers and in the output of honey. But with this has come a most discouraging spread of the infectious disease known as foul-brood. It some districts it has practically ruined the industry, and no one can fully estimate the extent to which it prevails. Last year the Kent bee-keepers were thoroughly dismayed when an expert, employed to test some of the hives, reported that out of 307 examined, no fewer than 109 had the disease. In other districts some of the most successful bee-keepers have had to destroy the whole of their stocks. To find out why it appears in any neighbourhood is far from easy, but modern conditions are more favourable to it than those formerly prevalent. The old-fashioned bee-keeper either killed his old stocks outright every autumn, or, after stupefying them with fumes of sulphur or dried fungus, added the workers of one colony to those of another. By the one plan disease was unconsciously stamped out of many hives, by the other a disinfecting process was unwittingly applied. His more humane and economical successor having substituted the bar-frame hive for the straw skep, is able to discard these methods, and to keep on his bees year after year, since neither bees nor comb can grow old, the latter being removed, and the former having naturally a short life. The plan is undoubtedly favourable to the perpetuation of disease.

After giving some particulars as to the introduction of foreign bees into this country in 1859 by the late Mr. Woodbury, and the opinion entertained by some as to the extent to which the trade in foreign queens may have affected the spread of foul brood, the *Standard* goes on to say:—

Bees are inveterate robbers, and no sooner does a hive begin to be weakened with the plague than the neighbouring colonists begin to plunder, a process that more and more join in as the usually energetic defenders show unmistakable signs of weakness and languor. Every raider carries away the germs of foul brood, and thus the contagion is rapidly spread, till the industry of a neighbourhood is ruined. Many who have been tempted to try bee-keeping on a very extensive scale have had their enterprise checked and their capital utterly destroyed by an occurrence of this kind. But the case of the poor bee-keeper, who trusts to making from £5 to £10 out of his two or three hives, is quite as deplorable. There are many small villages in which hardworking men add a little to their income in this way, and where the produce from bees of the village, on an average, comes to something between 50 or 60 lb. From £5 to £20 makes the difference between hardship and affluence in many cases.

Then follows a quotation from the BRITISH BEE JOURNAL regarding the treatment of diseased stocks, which we

need not repeat here, after which the article continues:—

Many bee-keepers have made praiseworthy attempts to check the evil by private effort, but with very disheartening results. One well-known owner made successful application to the guardians for the use of the workhouse disinfecting oven, and so purified his hives. In some villages the bee-owners have signed a kind of league and covenant, binding themselves to let their hives be inspected at any time. The worst of it is that there is usually some obstinate and cranky individual who persists in standing out from the voluntary associations, and as he is generally the worst bee-keeper in the neighbourhood, he renders the efforts of the others ineffectual. In a few districts the local association has appointed some one to examine all hives put up for sale, and if diseased they destroy the bees and disinfect the hive, but the owner in such cases obtains a price to which he is not entitled. Such a hive is absolutely worthless. Nature, if left to herself, would perform the work of destruction most effectually, but would leave millions of spores ready to develop into bacilli when they found a suitable medium. A difficulty has been experienced even where the owners of healthy stocks have offered to indemnify one who possesses diseased hives. If he belongs to the old school he is quite likely to adduce the fact that last year the hive was worth so much to him, and expect to be paid on the assumption that this ought to be the measure of its present value. He is on no account to be convinced that a hive which brought him in, say, a £10 note one year would be a dear purchase at ten farthings the next.

Under these circumstances, there does not seem to be any other remedy possible, except that which bee-keepers are urging the Board of Agriculture to adopt. This is to place foul brood on the same footing with other infectious diseases of animals. The cottager is already accustomed to the law. If swine fever breaks out in the village, the infected pigs are killed at once, and bees have become in many districts even more valuable than pigs. No other way seems open. A remedy has not been discovered at once simple, easily applied, and of quick operation, so that all could use it and effect a cure before contagion had time to spread. Private effort is quite unavailing, although the readiness with which an overwhelming majority of bee-keepers combine shows that compulsion is needed for only a very few obstinate individuals, and could be exercised with a great body of public opinion behind. The case in favour of the bee-keepers is so very strong that it is difficult to see how Mr. Gardner can possibly fail to appreciate the reasonableness of their request.

Beyond commending the above to the careful consideration of such readers as have not yet made up their minds on the subject dealt with, there is not much to add, except saying how fully convinced we are ourselves that only good can follow efforts, properly directed, towards the end in view.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the committee was held at 105, Jermyn-street, on Thursday, 13th inst. Present:—Mr. H. Jonas (in the chair), Rev. G. W. Bancks, Messrs. W. B. Carr, W. H. Harris, J. W. Sheppard, Major Fair, J. H. New, E. D. Till, J. Garratt, and J. M. Hooker, and F. H. Meggy (ex-officio), John Huckle, secretary.

Communications were received from the chairman and Mr. Glennie (treasurer), regretting their inability to be present.

The minutes of the last meeting having been read and confirmed, the report of the finance committee received and adopted,

The Educational Committee reported as under:—

"The following are the names of candidates who passed successfully at the second class examination, held on October 26 and 27, viz., W. R. Lilly, P. Scott, H. J. Banks, P. Scattergood, and R. Cock.

"The examination on the whole shows a satisfactory improvement in the knowledge of the candidates upon those who came forward in previous years. The general knowledge as to the practical part is satisfactory, although in many instances the answers are very meagre, and, in some, portions of questions are not answered at all. The candidates do not sufficiently study the questions put to them, and sometimes give a brief answer to the last part, and ignore the main points of the question altogether.

"The section relating to 'foul-brood' was very satisfactorily treated by nearly all the candidates and shows a marked improvement on last year.

"Only two questions referring to the anatomy of the honey bee were given, one in connection with wax and its production, the other with regard to the action of the tongue in collecting honey. With little exception, the candidates showed a hopeless ignorance of the subject, although the syllabus distinctly states that a knowledge of the anatomy and physiology is required for second class examination."

"Candidates for these certificates should be impressed with the obvious necessity of a better acquaintance with this branch of the subject, seeing that they may at any time be called upon to give instruction in bee-keeping.'

Letters were read from various affiliated associations in reference to the proposed formation of centres for conducting third-class examinations.

The Southern Association Sub-Committee reported that it was desirable that efforts

should be made towards resuscitating those associations which had been allowed to lapse in the southern and eastern counties. On the motion of Mr. Till it was resolved, "That the committee of the B.B.K.A. deeply regret the absence of organisation among bee-keepers in the counties of Sussex, Hertfordshire, Buckinghamshire, Cambridgeshire, Suffolk, and Norfolk. They deem it highly desirable that an endeavour should be made to form bee-keeping associations in each of these counties, in affiliation with the B.B.K.A., following the example of some twenty other counties."

Mr. Harris gave notice that at the annual general meeting he would move :—"That the managing body of the B.B.K.A. be styled the 'Council' in place of 'Committee.'"

Mr. Carr, Mr. Harris, and Mr. Garratt, together with the chairman and vice-chairman, were elected a special committee to consider the matter of "Foul Brood" as an infectious disease, and to submit the same for the consideration of the Minister of Agriculture.

The committee adjourned to Thursday, January 24, 1895.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

A LADY'S BEE-KEEPING.

[2137.] It is now nearly three years since I sent an echo from our hives in the far north. Years fraught with disaster, spring dwindling, weak and defunct stocks, honeyless seasons; that is the bee story of 1892-3, so far as we are concerned. *Nil desperandum.*

But I'm a bee-keeper still, enthusiastic as ever, and wiser, I trust, for the many lessons learned in the grand school of experience, where even fools may learn lessons it will be hard to forget. I am wishing to know if 'Mrs. Harrison," and "Bee-Kay," and "Beta" are always keeping well to the front, or if, like myself, they have been among the stragglers, who fall out of line and bring up the rear. But "they're far ahin' that daurna follow," and this year of 1894 I have moved forward, not just to the van exactly, but next to the bee-keeper who "takes the cake" for honey harvesting in this district. In the other apiary, only about ¼ a mile distant, and within sound of the sea where nearly all the work (except the extracting) is done by a lady—and, I may add, an invalid lady—they had over 1,300 lb. I am not just sure of the average per hive, spring count, but I think it was over 100 lb. We began the season with eight stocks in frame-hives, six "ruskies," and, alas! ten empty frame-hives, and finished with 1,020 lb. of honey, and all my empty hives filled up. I had six first and six second swarms from my ruskies, with which I filled up six frame-hives, leaving the queens to settle matters by the survival of the fittest, and filled the other four hives with driven bees. I think I have not seen anything better in this year's reports than our average, which was 100 lb. for every stock in the frame-hives, and 40 lb. for every swarm. Of course, some of the swarms did not come to the 40 lb., but then some of the frame-hives were over the 100 lb. a long way. One which was filled with a driven swarm of 1893 gave nearly 120 lb. of extracted honey, and had our drawn-out combs not given out before we put on the third storifying box, so that we had to give new foundation, I believe we would have had another 50 lb. We work still for extracted honey, and still go in for the wider frames, that is two single frames tied together, a sheet of foundation fixed between them, or a frame double the width of the brood-frame. In a good year they weigh from 8 to 12 lb.

I have a "Wells," but I cannot say much about the system. To begin with, I put two swarms into it, and in the end of the season all the bees in one stock joined the other stock, leaving the poor queen with scarce a subject. In the spring I lifted them out into a single hive, and intended trying other two swarms, but my first swarm weighed 6½ lb., so I took out the perforated dummy, and put them into the "Wells." In nowise did the hive seem too big. In less than a week it was ready for the upper box of drawn-out combs, which were all filled and sealed before the honey flow was over. The finest sections I ever had were six (in a hanging frame) I took from that swarm, beautifully sealed and finished, weighing over 7½ lbs. Speaking of comb honey, I heard about a bee-keeper who had got his bees to work out and finish, without a flaw, a beautiful crown. Removing it from the hive, he carried it indoors, quite proud of the lovely workmanship, a few bees still adhering; he placed it in a window, raising the sash so that the bees might find their way back to the hive. A lover of flowers also was this bee-man, and, this being a flower-show day, he hurried away to prepare for it, intending to return and close the window. But, "waes me," he forgot that important part of the day's proceedings. I think it was his better-half who, entering the room some time through the day, was amazed to find it swarming with bees, and beat a hasty retreat, thinking a swarm had taken possession. When the "gudeman" returned he went for the crown (which I have

no doubt would have "crowned" him king of the bee-keepers at the local show where it was to be exhibited), but for one bee who had gone out a thousand had come in, and the crown was simply *nowhere!* "Uneasy lies the head that wears a crown," and, perhaps, uneasy lay a head that night for want of one. I am not going to hilloa for one good season, seeing that every winter there's the wood to go through, but if I might pilot some beginners past the rocks on which I made shipwreck (or bee-wreck rather), I would urge on them to work on the *let alone* system in spring. A glimpse at the feed-hole in the quilt; as to stores, a cake of candy if short, all covered up snug and warm again, and for what more you would wish to know, watch the doors some bonny spring day. Wishing all readers of the JOURNAL a merry Christmas and a good honey harvest in the New-year that will soon be with us, and hoping some of our lady bee-keeping friends will tell us something of what they have been doing.—I am still, "A SCOTTISH COUSIN," *Banff, December* 11.

A SUGGESTION FOR ADOPTION IN 1895.

[2138.] It has been remarked by several subscribers to the BRITISH BEE JOURNAL, and not without reason, that correspondents who send queries of the most rudimentary kind, ought not to expect their communications printed in full. Sometimes, I admit, there may be peculiar circumstances to make the query generally edifying. But there is too little space in the journal already for important letters and papers, and I think you will do well to treat the bulk of the queries as briefly as other periodicals are in the habit of doing. I am not unmindful of a beginner's difficulties and do not wish you to be curt. I think also you are too kind to some of your correspondents who air their little doings, *ad lib.*, in your valuable paper. A simple acknowledgment in a column reserved for that purpose ought to suffice for anything that is not above low level.

It is a healthy sign to see the B.B.K.A. launching a new scheme for the examination of scientists in apiculture, for none can afford in any pursuit to rest on past achievements. Here and there one finds old bee-keepers who think "they have nothing to learn," and who believe "no one can teach *them* anything," but such belong to that hopeless class of whom George Sand has said, "they possess a large capacity for ignorance."

There is another sign abroad which is not of such favourable augury. Mr. Woodley has wisely but only gently touched upon it last week—I mean the vending for private gain of an *absolute cure* for foul brood, instead of openly proclaiming for the public good the composition of so *invaluable* a secret.

There ought to be as great a jealousy of empiricism in the profession of apiculture as in the profession of medicine. An M.R.C.P. or an M.D. who offends against professional etiquette very quickly loses his diploma.

Empiricism is "quackery." Why the word should have any connection with the call of the innocent duck I am at a loss to discover, unless the poor bird's self-assertive, harsh, and *reiterant* note be suggestive of "quack" advertisements.

There was an excellent article in the *Standard* of 15th inst. on foul-brood. The writer was evidently unacquainted with any specific for the pest, but probably he is not a diligent reader of the JOURNAL.

If I could not plainly see that such advertisements place the vendors on the horns of a dilemma I should be nothing better than—A GOOSE, *December* 17.

[Our aim and very sincere desire is to make the JOURNAL as useful to bee-keepers as may be, but the unfortunate part of the question as to its usefulness, is that so few think exactly alike. Our correspondent—whose aims in connection with bee-keeping are well known to us—is a case in point. He works with energy and zeal for the good of bee-keepers *other than himself*. How many are like him?—EDS.]

MR. WELLS'S REPORT.

[2139.] We must all feel very much obliged to Mr. Wells for his lucid statement of accounts for the past year; and certainly to those who understand the working of an apiary on Mr. Wells's plan it reads satisfactorily enough for a bad honey season; otherwise, an average of 32 lb. per stock is not an astonishing success, especially when it is considered that every particle of honey in the hive is removed, leaving nothing behind for the bees' winter use, except the stored pollen; for in no other way could such a large amount of wax be obtained. Then we must assume that out of the gross profit of £1. 4s. 3d. per each stock, the winter store of sugar had to be provided, and, consequently, the net profit would be somewhere about 18s. per stock. Well, I think I know of several larger averages than this on the single-queen system, and, therefore, we must wait yet another year for proof of the superiority claimed for this double-stock system.

While writing I should like to say that I think the very best remedy for foul brood will be found to be "Izal." It only occurred to me in the summer that "Izal" might be a better remedy than phenol, and as I had preserved two very badly-affected stocks (which I found dead in the spring) for experimental purposes, I first washed the combs, and the hive, too, with a solution of about 1 in 500 of warm water; I then sprayed the combs with 1 in 750 of weak sugar syrup, and left them to drain. I then threw into each a driven

swarm (about 4 lb. of bees), and began feeding with sugar syrup medicated with "Izal," 1 in 990, which was *taken greedily* by the bees.

The first and second batch of brood came out without a sign of dead, and both hives went into winter apparently quite free from disease, but, of course, one cannot say what may happen in the spring. Certainly as far as the bees themselves are concerned, they take very kindly to the medicine, and I never had the least trouble in forcing it, which is always a difficulty with carbolic, and my present opinion is that "Izal" will surpass all other remedies as a cheap, agreeable, and effective remedy for this bee-keepers' abomination.—THOS. F. WARD, *Church House, Highgate, December* 16.

[Without waiting for any reply to the above from Mr. Wells, we think our correspondent has mis-read the details given by Mr. Wells on p. 494. The "profit" stated therein is *net*, not "gross," and the cost of sugar for supplying his bees with food for winter is included in expenditure for the year, as stated at the conclusion of Mr. Wells' letter (p. 495). Again, it is surely a slip of the pen on the part of our correspondent to put the cost of feeding at 6s. 3d. per stock, while counting the eight double-queened hives as sixteen stocks? In this way the sugar for feeding would have amounted to £5, whereas Mr. Wells' total expenditure for the whole year only reached £4. 9s., sugar for feeding included.

Referring to the measures taken for disinfecting the combs and hives in which foul-broody stocks have perished, we would point out what our correspondent has probably overlooked, that the so-called "best remedy"—otherwise known as creolyne, alias soluble phenyle—has been for many years recommended in Mr. Cowan's "Guide Book" as preferable to carbolic acid or phenol on account of its being entirely non-poisonous and non-corrosive as regards human beings, and, when properly diluted, its being freely taken by the bees (see pages 150 and 165 for directions how to use it.)—EDS.]

COUNTY BEE ASSOCIATIONS

AND STAMPING OUT FOUL BROOD.

[2140.] In connection with your recent articles on the necessity of taking steps to check the spread of foul brood, I am pleased to say that at our last committee meeting, held on December 10, it was resolved:—"That Mr. Cock (the expert to the association) be empowered to buy, at his discretion, from cottagers, at the lowest sum he could obtain them, certain hives suffering from foul brood and destroy them, and to report the matter at the next committee meeting."

I venture to think that this is a step in the right direction.—HAROLD E. TWENTYMAN, Hon. Sec., Staffs. B.K.A., *Castlecroft, December* 13.

[We heartily commend the Staffordshire Association committee on their action in the above matter. As to its being "a step in the right direction," the general approval with which it is certain this sentiment will be received ought to afford safe grounds for believing that other and kindred associations will be following the same pathway, which, as every one must agree, can only lead to the all-round good of the craft.—EDS.

"COMPULSORY POWERS."

[2141.] I have been hoping to see in your columns a larger expression of opinion as to compulsory powers for dealing with foul brood; as I think there are many who are deeply interested in the subject who could contribute valuable facts, if they would, which might materially assist in the provision of a remedy. It is well known that a strong objection exists to making known the presence of the disease, and sometimes a greater objection still to try and cure it, or accept aid that will assist in so doing. Some years ago it was my misfortune to suffer in consequence of the action of a man who took up this position, and whom to-day I believe is helping to spread the disease by a continuance of such conduct. Clearly this is a case for compulsory powers. For busy men there is quite enough work to do in keeping things straight in the ordinary course, and if this sort of thing is allowed to go on unchecked, the time may come when it will not be worth while (however strong the love of bees may be) to keep bees at all in some districts. I simply quote this case as an illustration, for I have had no trace of foul brood in my hives for some years past, and have no reason to fear infection. I, for one, am much pleased with your recent editorials on this matter, and hope we are within measurable distance of the time when honest bee-keepers will welcome, and unscrupulous bee-keepers dread, a wholesome application of a law enacted for the public benefit. —TOMTIT, *Swansea, December* 17.

A CHRISTMAS BEE-TALK

ABOUT WINTER WORK, FOUL BROOD, &c.

[2142.] I had laid down my pen with a view of—in bee-lingo—"going into winter quarters." In other words, after a hard season's work, I was proposing to spend the evenings during the dull period of the year toasting my toes at the fireside, totting up results, reading bee-literature, laying plans for next season, and picturing new devices in my mind's eye, in the hope of hitting upon a practical notion of some sort or other which might be of use to my fellow bee-keepers, but particularly so to myself. "Candid confession is good," &c. However, on looking through the most recent numbers of the JOURNAL and *Record* (both of

which I, of course, "reads reglar"), I find therein referred to one or two little matters which recall past events and incidents to mind, and cause me to put off my semi-dormant state, and postpone the intended period of hybernation much in the same manner as a fine mild day would bring out the bees at this period of the year.

Well, sirs, having got my pen in my hand, the query occurs, What are bee-keepers doing now—meaning, of course, what is interesting them in the bee line? for we cannot suppose that their time is altogether absorbed in anticipating the enjoyment of the coming merry season, or in devoting their spare hours to assisting the goodwife in preparing the mysterious compound which children love and we of older growth associate with dyspepsia and doctors. Incidentally, however, let me say I lend a hand myself during the "gay and festive," and am almost vain enough to suppose that my young folks would hardly consider it a Christmas pudding at all unless "dad" had a finger in the pie. But, to leave puddings and return to the bees. I know how easy it is to forget those tiny helpers of ours who occupy the other end of the garden, and how many little jobs intended for their well-being were made a mental note of—and forgotten—when the bees have gone to rest. There is a small note-book in the workshop of my apiary in which, as the season advances, notes are made of things to be worked out when the winter time comes — new hives and apparatus to be made, books to be read, &c. And it is wonderful how interesting and helpful it is in the dull months to refer to this book, and the many things that but for it would have been forgotten, but which can now be made or obtained. Above all other periods of the year, now is the time to repair our stock-in-trade, to make or procure such additional appliances as are likely to be required next season. Our note-book informs us where a leaky roof is to be found, and if not already seen to we don't delay, but mend it, and so make sure that all packing on the top of the hives in use is, above all things, dry. Any day severe weather may set in, lasting perhaps for months. Moreover, the late wet autumn must have severely tried the weather-proof qualities of roofs, and if wet quilts are not changed I pity the poor bees if severe weather sets in. There is yet time to make them—like ourselves—comfortable at Christmas.

For myself I consider it a most essential point in successful wintering to have the quilts dry. Old newspapers are capital things to spread over the coverings before putting on the roof, as affording great protection in more ways than one. Only beginners will need reminding how necessary it now is to see that hive entrances are kept clear of dead bees, by removing any seen to accumulate. It should be known that when the weather permits bees will bring those of their comrades, that have died inside the hive from age and other causes, to the entrance and there leave them; hence the need for an occasional glance to see that there is free entrance and egress. This seen to, and provided there is plenty of food within, nothing need mar the bee-keeper's enjoyment of the gladsome season, now fast approaching, so far as his bees are concerned.

Looking back at my late peregrinations, I grieve when thinking of the large number of skeps we came across whose owners, being poor people, could not, or would not, feed their bees, though advised to do so. There were dozens of skeps, healthy and strong in bees, yet without a pound of food to carry them through the long winter months. Some will no doubt have perished of starvation already, and so be spared the sorrows of a "hungry Christmas," with no one about to "save the bees." I much fear that death will claim the majority of such stocks before spring comes round again; but it makes one feel what a jolly time a bee-keeper of the right sort could have in carrying round a few bucketsful of warm syrup, and giving to these poor little starving wretches a good Christmas "feed."

Foul Brood.—Referring to this subject—our worthy editors are laying down the law pretty stiff, and not a whit too soon—few know the extent of this dire bee disease in some counties. I undertook a long and pleasant journey after the brunt of last season's work was over, for the purpose of improving my education in bee-keeping, and to make myself acquainted with the science in its various phases, as practised by the humble cottager upwards. Thanks to the guidance and kindly help of a gentleman, whose means and influence are largely devoted to the welfare of bees and bee-keepers in other counties as well as his own, the object in view was fully attained. Indeed, it may be safely said that, more experience was gained during the few weeks spent journeying from apiary to apiary in the southern counties, than I could otherwise have obtained in several years by staying at home. So gratifying to me was the result that if all be well next autumn I am off again on another "wheeling" trip, looking up old and new acquaintances. During the visit referred to I first made the acquaintance of our *bête noire* foul-brood, in a cottager's hive about twenty-five miles from here. Both my friend and myself were exceedingly sorry for this case, as they were poor people but most enthusiastic over the bees. Of their two hives one was perfectly clean, the other dirty—*very dirty*. My friend told them the latter should be destroyed in order that the spread of the disease might be stayed. We explained the case to them in all its bearings, and, although grieving for the loss of the bees, yet for the general good of the community they consented, and the bees and combs were entirely destroyed the same night. Having now got fairly upon the track of foul brood

we followed it up, day by day, working from 8 a.m. to dusk at eve. Slowly but surely we traced its ravages from the outlying hives in the neighbourhood where first found down to its centre. I must, for obvious reasons, forbear indicating the exact locality now reached, but here we found a small neglected apiary in charge of the "beeman" of the village, with foul brood enough in his wretched hives to contaminate the whole county. This *authority?* (save the mark) on being informed of the state of affairs, "knew quite well what foul brood was; had it years ago, and could cure it easily, would have a look at it." He did look at it, but "didn't call *that* foul brood," not he, he knew better than that. "Smell it," said we, but our ancient friend declared "it ain't got any smell," though the familiar and noisome odour could be detected a yard off! We suggested its being a case that would not admit of a cure, and that the stocks would have to be destroyed; finally urging him to let us burn hives, bees, and combs that night. "What," said he, "destroy healthy bees like them? Not if I know it." And although offered full value in cash for his three hives and bees if he would have them destroyed, that plague-spot still remains, and is likely to remain, contaminating one of the fairest spots and finest honey districts in the whole of England, unless the compulsory powers advocated in your editorial are obtained, and all through the obstinacy of one whose prejudice and want of knowledge blinds him to common-sense. In fairness to others it must be added that most of the good people whose hives were found to be infected expressed perfect willingness that extreme measures should be taken, and they were taken. Still, there are some who adopt the line taken by our old friend referred to above, and it is a great hardship and a crying shame that the innocent majority should suffer through the callousness or the ignorance of the few. For this reason true bee-keepers should, like myself, be glad the matter is being brought prominently to the front, and hope that ere long we shall have compulsory powers to deal with all such cases as the one I have above detailed. This is one of the points that has for the present delayed my going into winter quarters.

Since writing the above another issue of the JOURNAL is to hand, and it is pleasing to see that interest in the foul-brood question is in no way flagging. Again our Editors return to the charge, and Dr. Sharp is also to the front, together with the veteran bee-keeper, Mr. Wm. Woodley, who has a say in "Notes by the Way." Mr. Wells' report, too, shows that my experience in one part of the county of Kent resembles his experience in another part thereof. The result is that this bane of the bee-keeper seems to exist more or less all over the county, and unless something be done may go from bad to worse. There is some similarity in the case quoted by Dr. Sharp and the one I have referred to above. No doubt he will bear me out that the instances mentioned are only examples of dozens of cases to be found by those who will trouble to make inquiries. I am thankful, however, to say that in my own neighbourhood I am not aware of a single diseased stock.

Having in mind Mr. Woodley's remarks on page 492, I would add that we too have a few poor bee-keepers not very far off, and I was surprised and sorry that he should have written as he has on the matter dealt with, because Mr. W. has proved that in most things apicultural he takes a sound, common-sense view; and I trust it will turn out that it is rather a slip of the pen, than a conviction of his mind, when he says: "the law will deal hardest with the poorest in this as in other matters." Again, "the poor man's little pig is slaughtered — it is his all. So with the little apiary of the poor cottager," &c. No, friend W., much as I respect your opinions in general, I cannot agree with you here, having regard to the enlightened laws of this the tail-end of the nineteenth century. I fail to see how even the poorest cottager will be a loser (*vide* Mr. Wells' letter, cases 2 and 9), when it is proposed to give him at any rate some compensation for so utterly valueless an article as a foul-broody stock of bees. I feel sure Mr. Woodley would modify his views, if his apiary was in constant danger from the proximity of this disease as those of many bee-keepers of my acquaintance are. In many cases, to my knowledge, the poor cottager would never have possessed a hive at all, much less an apiary, but for the liberality of the very gentlemen who are now sufferers from the contiguity of the pest, and without any chance of redress. It is a waste of money to attempt a cure whilst there are scores of hives reeking with the disease in the neighbourhood of the careful bee-keeper's apiary. Besides, if a hive is cured to-day, it may be contaminated again to-morrow, so that we are forced to the conclusion that the only means of cure at this advanced stage of the dire disease is the radical one. When this has been effected, then, and not till then, shall we be able to test and appreciate the value of the, at present known, preventives and cures.

MINCEMEAT AND GRUMBLES.—It does not quite "fit in" with a "bee-talk," whether of Christmas or otherwise, to include either mincemeat or grumbles, but, when the writer of the aforesaid "talk" happens to be a family man, who takes a more than ordinary share of interest in the domestic programme of the festive season, he is apt to be somewhat tried by such interruptions as an invitation to "sample the mincemeat!" and others of a like nature. However, as "no grumbling is allowed" at our house just now, one must pocket the inclination to growl, otherwise this "talk" won't get into the Christmas number of the B.J. at all! I may also observe that the

strains of the latest waltz in the adjacent room, and the "starts" I have had through some one trying the explosive power of "Tom Smith's" crackers by way of rehearsing "effects"—are not conducive to coherency, but rather tend to mix things up a bit. Moreover, I find that we bee-keepers cannot, as a rule, talk very long without having some grievance to ventilate, but what man, whose heart is all right, can air his grievances or give way to grumbles when the hand of old Christmas is with in reaching distance? Not I, for one. I would rather hope that bee-keepers any way will show that the bond of good-followship is worth uniting in, and join hands in making our grumbles as few and our grievances as light as may be in '95.

Finally, I have not overlooked Mr. Webster's kindly invite (p. 495) to a little "argufying." I only stop to say, with the waiters, that I shall have much pleasure in joining in the "Coming, sir!" shortly, but just now will conclude by hoping that our editors and readers of the B.J. will have the "good time" I heartily wish them, and that 1895 may produce for us all two things—viz., a record honey year, and a good start towards securing the mastery over our arch-enemy, foul brood, before its close.—HENRY W. BRICE, *Thornton Heath, Surrey, December* 21.

UNITING BEES.

TRYING DR. MILLER'S PLAN.

[2143.] On packing up my bees in October for the winter I found a queenless stock, and asked a friend to get me some driven bees with queens, which he promised to do. They arrived on November 14, and being from home the whole of the day I thought I would try the plan mentioned in the BEE JOURNAL some few weeks ago (I think it was from an American bee-keeper). The article stated that failure had yet to be recorded. The method was to place a sheet of paper over stock hive, make a hole in centre to allow only one bee to pass through at once, and place the hive containing bees to be united over that, and they would gradually work down and become one community. Well, my bees arrived in a "swarm-box." I bored a ¼-in. hole in bottom and placed over feed hole in quilts of stock hive. I feel sure that every bee that passed down was promptly killed and ejected. The alighting board was covered with dead bees. And so, finding how matters stood, besides being afraid of losing the queen, I at once stopped up the hole to prevent any more from passing down. November 17 being a fine day, I shook the bees off frames in front of hive, floured them; and when nearly all had run in again I did the same with the driven bees, caught the queen, and placed her at entrance, and saw her run in. But not many minutes afterwards a worker bee dragged her out again; I quickly released the queen, and again put her in; this time she was accepted, for I watched till almost dark, and saw no signs of her being turned out again. When packing up a week later I examined the centre frame and saw that she was all right. No doubt their being queenless for a long time and the lateness of the season had something to do with their unwillingness to accept the driven bees and queen, and the failure of above plan of uniting. Is this so?—GEO. E. PUTTERGILL, *Beeston, Notts, December* 11.

[Before our correspondent laid the onus of failure in uniting bees on Dr Miller—whose plan was mentioned on page 361 of our issue for September 13 last—he should in fairness have carried out plan as advised therein. As it was, the most important conditions to the ensuring of success on Dr. Miller's plan were absent. In the first place, instead of uniting two *colonies* of bees by placing a sheet of paper between and allowing the bees to enlarge the very small hole left by gnawing the paper away, our correspondent attempted to unite a lot of homeless and foodless driven bees to an established stock. No wonder that each of the hungry strangers on passing through the ¼-in. hole in the *board* (not paper) was "promptly killed." Bees with a furnished home stocked with food will resent the intrusion of foodless and homeless strangers, but we can quite understand two colonies uniting peacefully enough where each were equally well supplied and a temporary division provided. On the other hand, when the bees "in possession" were shaken off their combs and thrown down in front of the hive, as was wisely and promptly done in the second attempt, the conditions were made more equal and consequent success rewarded the operator. —EDS.]

ASSISTING APICULTURE

IN THE CONGESTED DISTRICTS OF IRELAND.

[2144.] Seeing in last issue of the BEE JOURNAL (p. 492), reference again to the help intended to be given to apiculture in the congested districts of Ireland by the Agricultural Department of the Irish Land Commission, would you kindly allow me to ask through your journal that some one who knows will inform the many who are continually asking me for the information I cannot give, viz, What is intended to be done for the extension of apiculture in the congested districts of the co. Galway, where there are many respectable persons who would gladly avail themselves of any such help and instruction in bee-keeping, and where the several districts are extremely well adapted to apiculture? This information through your journal will be thankfully received.—T. KIRWAN, *Tuam, co. Galway, December* 14.

BEES FLYING IN WINTER.

[2145.] I have twelve hives, all of them packed on the "Simmins" plan, with a free passage of

air about the bees, they all have ekes, eight of them are double cased, and four single cased. Thus far into the winter I have noticed that the bees fly most readily from the four single cased hives, and from one of the double cased. In this one the eke is about 6 in. high, having 3 in., more or less, of the top open so that the air passes freely under all lower edges of the brood box. The hives are all fairly close together on one plot of ground.

I should like to ask your readers, who have the two styles of hives placed in comparatively similar positions, to note how the bees fly, if more from one kind than the other? I take it for granted that the bees that have had the best cleansing flight, will be the best to go through a long frost.—NED. SWAIN, *Fordwich, Canterbury.*

DOUBLE *V.* SINGLE QUEENED STOCKS.

[2146.] I was pleased to see Mr. Wells' report for '94, as I had been trying the two-queen system, and see no great advantage in it so far as honey-gathering goes. In order to try them fairly side by side I put two strong stocks with young queens in a "Wells" hive, and alongside of them two single hives with old queens. From the two last-named I extracted 65 lb. and 70 lb. respectively, while the "Wells" yielded 120 lb. The two single stocks got 8 lb. of sugar each, and the "Wells" hive 20 lb. to feed up for winter. The benefit I see in the "Wells" hive is that a two-queen stock only takes the room of one single one in the apiary.

I had under my care a single stock of bees bought last spring, and I have this last season extracted from that hive 95 lb. of honey, besides forming two nuclei. The hive having swarmed at the beginning of the honey season, I put the swarm back, and made the nuclei with the queen cells.—"A CHESHIRE MAN," *Congleton, December* 14.

METEOROLOGICAL SUMMARY.

NOVEMBER, 1894.

Locality, Stoke Prior, Worcestershire.
Height above sea-level, 225 ft.
Rainfall, 2·52 in.; heaviest fall, 0·62 in. on 12th.
Rain fell on sixteen days.
Max. shade temp., 60° on 2nd.
Min. temp., 23° on 30th.
Max. temp. at 9 a.m., 56° on 1st.
Min. temp. at 9 a.m., 27° on 30th.
Frosty nights, six.
Max. barometer, 30·25° on 29th and 30th.
Min. barometer, 28·85° on 14th.

On the whole November has been a mild month, notwithstanding the six frosty nights. Bees were often able to take a flight. Few fogs during the month. A high barometer at the close. PERCY LEIGH.

Echoes from the Hives.

Honey Cott, Weston, Leamington, December 15, 1894.—The mild humid weather still continues, and bees are very much on the wing; during the last day or two they have been out like swarming. The weather subsequently proving that bees are as good as a weather-glass at this time of year. At the *conversazione* held during the Dairy Show week some discussion arose about the difficulty of getting bees to clean up wet combs that had been extracted from, owing to the bees *re*-storing some of the honey in them instead of taking it below. I found that the trouble comp'ained of could be got over by inserting an empty box between the stock-hive and the box where the combs for cleaning-up were stacked up above. The bees then gathered all the honey from the wet combs and carried it below. I have been getting my son to make some bee-escape boards, so as to be in readiness for the good time we hope to be coming in 1895. Wishing all bee friends the compliments of the approaching season.—JOHN WALTON.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

J. R. (Greenhithe).—*Foul Brood.*—Comb received is so badly affected with foul-brood that we advise prompt destruction by burning of the bees, combs, and frames. No good could come of any attempt to cure the stock, which, every day it remains contiguous to other hives, is a source of danger to them. We should already fear for the "weak stock close to" the diseased one. It is more than probable the mischief has arisen from your putting the bees into the hive (in which a stock had died the previous year) without disinfecting it.

A correspondent—for whose trustworthiness we can vouch—and who is at present the owner of a large apiary, writes:—"If 'Castle Hill,' Addington (*vide* BEE JOURNAL of Dec. 6, p. 489), is in a position to take a farm of 250 acres one is to be had on the G.N.R. main line. Good bee district. And should 'Castle Hill' be disposed—for mutual advantage, of course—to transport my bees, &c., thither, put him in communication with me."

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Editorial, Notices, &c.

CHRISTMAS.

Circumstances, quite outside *our* control, place us in the unusual position of being compelled to send out two issues of the BEE JOURNAL in one and the same week. We need not say why, except that, along with workers in general, those whose task it is to furnish the weekly pabulum, supposed to add to the intellectual nourishment of bee-keepers, are being treated to a short holiday in the week devoted to Christmas. It is therefore more than probable that the issue dated December 27 may be delivered on the 25th, and thus make Paul Pry's "Hope I don't intrude" apology a very needful one, for we do not suppose for a moment that either the most recent recruit or the most ardent "old hand" will be longing for his "journal" on Christmas-day.

The curtailment of our usual space by the "Title and Index" may, therefore, be looked on as a blessing in disguise all round. Anyway, we shall regard it as such, in having to confine ourselves here to the few but very sincere words of thanks, due from us as editors, to those whose valuable help is recorded in the twenty-second yearly volume of the BEE JOURNAL, which this number completes. Without their help our pages would have lacked the "pith" of their matter, so far as making the BEE JOURNAL not only interesting but useful and instructive. We repeat our oft-expressed opinion that no one can write for bee-keepers but *bee-keepers*, and bearing this in mind, there is no flattery in saying how much our thanks are due to contributors whose experiences and work among their bees add to the value of this volume.

While 1894 has only been a moderate success to bee-keepers individually, the pursuit has made very marked progress, and, we may be allowed to add, the JOURNAL has progressed too in no small degree, which but adds to the obligation we are under to contributors and readers alike. We therefore close by reciprocating the good wishes and kindly feeling expressed in so many letters received of late, and, in the good old-fashioned words, wish to all "A Merry Christmas!"

THE EDITORS.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to Advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*" *(see 1st page of advertisements).*

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter, as well as the page on which it appears.*

FINDING THE QUEEN.

SOME HINTS TO BEGINNERS.

[2147.] It is about three years and a half, Messrs. Editors, since I sent you a wail on my inability to find the queen in a well-filled hive. Time and perseverance having produced the desired effect, I will, with your permission, touch again on the subject. My remarks will more especially concern beginners, though from occasional queries in your columns it would appear that there are many folk who keep bees in their gardens, and yet cannot secure the "mother" of the hive when it would be advisable to do so. These may get honey, and even some pleasure, from their bees, but in the real joy of bee-keeping they can have no share, for the key to the art is finding the queen, and no hive-owner should rest until he has the trick of it.

How is it to be done? Simply by doing it; for there is no royal road. The signs of the near neighbourhood of the queen-mother as shown by the bees are so subtle, and so dependent on the individual nature of the bees, the condition of the queen herself, and the circumstances of the moment, that they are of no value to the beginner, who will indeed have learned to find her before he can appreciate them.

He must practise on his own bees, and it is of much importance that they should be of a quiet nature. The Carniolan has lately fallen into disfavour; but there is no bee so suitable. If the strain is good, these bees need no intimidation. They will remain quiet on the combs under inspection, and will very rarely sting, except when being crushed. Carniolans, as compared with other races, use little propolis, and the queen is easily distinguished. So far, nearly as much may be said of the pure Ligurian; but the Carniolan's one vice, prolificness, settles the question in its favour. The owner of a hive of pure Carniolans may get but little honey; but in a fine summer they will treat him to every known vagary in the way of swarming, give him in-

crease of stock, and a varied practice which will be of the greatest value to him as a beginner. In the autumn he can requeen his stocks at a small expense if he wishes it.

Yes, practice is the thing. And here I must appear to go straight against advice often given in your columns to the tyro. He must *not* let his bees alone. By no means. The first year or two let him open his hive and search for the queen as often as he has the mind to do so. How else is he to learn? Only let it be in fine weather, and on fairly warm days; for chilled brood is half-way towards foul brood. This will be touched on later. Here it need only be said that it is well to have two small warm and light coverings at hand, with which to protect those frames which are not being inspected at the moment. No brood frame should be out of the hive for more than three or four minutes at a time unless it be well covered with bees.

In searching for the queen, the greatest possible calm and gentleness is necessary, so as not to alarm and set her on the run. There must be little or no smoke, and any jar or kick to the hive-legs must be avoided when opening the hive. The queen will generally be found where a good mother should be—in the nursery, if not on special business elsewhere. When separating a frame from the others, before lifting it out for inspection, Mr. Doolittle has wisely advised us to look downwards along the side not fully exposed to the light. If on the frame at all, the queen will probably be on that side of it, and, looked at in this manner, the brightest part of her body, her legs and abdomen, will be most likely to attract the eye. But a pure Carniolan or Ligurian queen will be recognised in any position when the eye falls upon her. Frames should be examined on a settled system—round the rim first, and so inwards towards the middle, is as good a way as any. On reversing the frame, look sharply to see that the object of your search has not slipped back again, or hidden herself in the gap below the comb.

(*Conclusion in our next.*)

SOME CHRISTMAS NOTES.

[2148.] On reading Mr. Wells's report for 1894 (p. 493) we can but congratulate him on his successful take of honey; there must undoubtedly be something in the "system," for I can vouch for the fact that very little honey was secured in single hives this season either in Kent or Surrey, and when Mr. Wells secures as against abnormally small returns, no less than 74½ lb. per hive, the fact requires no comment. One thing, however, has struck me, and that is the 24 lb. of beeswax, and sold at 2s. per lb. Now, for such beeswax as I have had for sale 1s. 6d. per lb. (or 1s. 3d. in bulk) has been all I could obtain. For this reason, no doubt others besides myself would be glad of information—1. If a ready market is to be found for pure beeswax at this price, and whether it is sold in small quantities or in bulk? 2. Whether Mr. Wells gives his bees full sheets, half sheets, or only starters of foundation? It would also be interesting if he would tell us the *modus operandi* followed in obtaining the 3 lb. per hive of beeswax per season. I go in for a little comb-building in my own apiary, and the way I proceed is to give a strong stock during the feeding-up time, half sheets of foundation. This season I had over a gross of combs built in this way, and having in mind the remarks in "Useful Hints" on the matter, it has occurred to me that if Mr. Wells will give us his views on the production of bees wax, some besides myself may be able to assist in developing this particular line of "profit to bee-keepers." Anyway, the matter is worth consideration and discussion by the fraternity. B.J. readers, therefore, who have a "wrinkle" on the subject, please come to the front, and they will receive a hearty welcome.

Re-queening Hives.—I next note Mr. Knewstubb (2124, p. 482) is inquiring whether it is necessary or helpful to re-queen hives? My own views of this matter are that although a stock or colony of bees will often re-queen themselves when "mother" becomes "tottery" and infirm, yet it cannot be considered the perfection of bee-keeping to allow things to reach this stage. A queen—properly reared and selected—will be good the first year, in her prime the second, and, if given scope for the full exercise of her laying powers during this period, she will—so far as making the stock profitable—be fit for nothing thenceforth. In a very few cases queens are found to do fairly well the third year, but the uncertainty of this occurring, and the tendency of bees headed by old queens to swarm on the slightest provocation makes the game not worth the candle, all things considered.

When joining up stocks for the winter I have noticed that in every case where there has been trouble in getting the bees to unite peaceably, they have been headed by old queens. On the contrary, when dealing with bees headed by young prolific queens, I have joined them up almost anyhow with uniform success. Bees, in my experience, will not willingly accept an old queen if they have any means of obtaining a young one. And here let me say I have had queens aged under two years "old" (old on account of the work they had done). Without dwelling longer on this point, it may be said that the editorial foot-note to this question on p. 482 fits the case exactly. when you say "We think a great majority of our leading bee-keepers in this country agree in viewing young queens of the utmost importance in achieving success." I should call it rather slipshod work if bee-keepers did not take the matter into their own hands and see that every hive is headed by a queen that

would give a good account of herself, and not leave this all-important matter to the entire discretion of the bees. In visiting the apiaries of our neighbouring bee-keepers, how often do we hear the words: "This is my best hive," or "This stock is doing ever so much better than the others." But if bee-keepers would only inquire a little further into the matter, they would, I think find that in nine cases out of ten the difference rests primarily in the queen, and it is, therefore, the bee-keeper's own fault in a very great measure that one hive does so much better than another in the same apiary.—H. W. Brice, *Thornton Heath, Surrey.*

DOUBLE *VERSUS* SINGLE QUEENED HIVES.

A GOOD REPORT FOR 1894.

[2149.] Having just read the very interesting report sent by Mr. Wells under the above heading (2,130, p. 493), I thought I must hold up my hand and say a word in favour of the single-queened hives. I must, however, say that, in comparison with his neighbours, Mr. Wells has done wonderfully well.

Now for a word about my own bees. This is what I should call a very fair honey district; we have about 12 acres of old-established apple orchards, plenty of snowy nespilus growing wild in the copses, 20 acres or so of sainfoin, within a radius of $1\frac{1}{4}$ miles, and a lot of white clover in the pasture land, also a good many of old-established lime trees within the mile radius.

I started the season with nine frame-hives and one skep; from these I have taken about 240 sections and 224 lb. extracted honey.

My balance-sheet for the year stands as follows:—

20 doz. sections, at 6s. per doz. ...	£6	0	0
224 lb. extracted, at 6d. per lb. ...	5	12	0
Total...	11	12	0
Deduct expenses for foundation and sections	1	15	0
Balance for labour	£9	17	0

I have had a lot of swarms, so that at the end of the season my count has increased to twenty stocks of bees, including two made up of driven bees. I only had to feed two or three stocks, as I make it a rule to take no honey from the brood nest. You thus see my average take from the ten hives (spring count) is 46 lb.; this is really from the nine frame-hives. I took no honey at all from the skep which gave me two swarms.

The reports of the double-queened hives have not yet aroused sufficient enthusiasm in me to start one, as I have had queens this summer which have been prolific enough to cover thirty standard frames with bees, the frames having been storified, with excluder over the ten bottom ones. Of course my profits would have been larger if I had been able to realise so good a price for my honey as Mr. Wells. The total results would then have been increased by no less than £7. 6s. 8d., or a profit for labour of £17. 3s. 8d. on the season.

The wax, I reckon, will only about pay for the trouble of melting down. The honey flow in this district lasted about a fortnight. I will leave it to your readers to strike the balance between the double and single hives, putting their own value on the eight extra stocks I finished the season with.

Wishing you and fellow bee-keepers the compliments of the season, I am, &c., G. Jordan, *Steeple Aston, Oxon, December* 14.

SELF HIVERS.

[2150.] I again beg space for a line in reply to Mr. Webster's questions (2131, p. 495) about my self-hiver; the more so as it will also serve as an answer to many who keep writing to me by each post for information regarding it. Mr. Webster asks, "Is it expensive, and is it simple?" Well, I find that in the very substantial way we are now making the hivers, we shall have to charge about 7s. each for them, but a good swarm saved would be well worth two, and as they will last for any number of years, I doubt if any one on seeing them will call them "*dear.*" Next—"Are they simple?" I think they are. The bees enter their hive in the usual manner on a false alighting-board, passing in under a row of little hinged plates of extremely thin zinc, each plate is $\frac{7}{8}$ in. long and $\frac{1}{4}$ in. wide, and has a little less than $\frac{1}{8}$ in. stamped out of the metal right up the centre for about two-thirds of its length, so that the least possible obstacle is presented to the bees entering the hive when loaded. The entrance is about $8\frac{1}{4}$ in. in length, and in order to leave the hive the worker bees must pass through excluder zinc or else run forward and upward past the similar row of plates placed the opposite way, which entrap the queen and render her return to the parent hive impossible. They are then in the box placed for their reception, this latter being a substantial box with sloping roof, so as to make a swarm safe for weeks in any weather. I should mention that the workers can leave through the excluder-zinc at any part of the hiver. The appliance is so arranged that its weight keeps it in position when attached to a hive without any fixing whatever, providing the hive is within a reasonable height from the ground. The only attention needed is the removal of the entrapped drones occasionally, and the only parts that can possibly get out of order from wear and tear are the detachable rows of hinge-plates, which can always be refitted for a few pence if sent to me by post.

By taking out four screws the whole apparatus fits inside within the "hiving-box," forming an ordinary square box for storing

away, or sending per parcel post, at a cost of 1s. 4½d.

I should add to the foregoing letter that the hiver touches no portion of the hive but the entrance, and therefore cannot interfere in the slightest degree with any plan of working a hive. Also that two "hivers" could be attached to a "Wells" hive.

The appliance is already "protected," and we hope shortly to place it on the market, and advertise it with illustration in B.B.J.—G. W. HOLE, *Patcham, Sussex, December* 17.

SELF-HIVERS.

MY EXPERIENCE WITH MR. HOOKER'S DEVICE.

[2151.] In response to a request made in the latter part of the year 1892 I made a trial of Mr. Hooker's self-hiver, which, earlier on in the same year, was exhibited at the "Royal" show at Warwick. The hiver was attached to a strong stock left without supers to encourage swarming, which it eventually did, the swarm clustering in an adjoining garden. I was engaged at work some 200 yards away from the apiary, and on receiving my usual intimation that a swarm was "off," I went down and examined the swarmed hive, and found that, owing to my failure in fully attending to the instructions received as to managing the "hiver," the swarm — after remaining "clustered" outside for a quarter of an hour —returned to their hive. I then discovered my mistake and at once rectified it. A day or two later the swarm again issued, and this time the queen ascended into the top hive prepared for her, but, finding only a small part of the swarm had joined her, she was returned for another "trial." Unfortunately, however, young queens were hatching out, and the old one was killed, so I got no further chance with the hiver that season.

The following year (1893) was, as most of us know, a non-swarming season, and I did not have a single natural swarm, but there was plenty of honey, and the bees of the stock to which the "hiver" and spare hive was attached —the latter being fitted with six full frames of foundation—actually took possession of these frames, worked out some of the foundation into combs, and stored honey in them. Thus showing that if only for ensuring us against loss of swarms, and giving the bees a place for storing surplus during a honey-glut, the hive is a valuable acquisition.

Talking of "honey-gluts" reminds me of the work done by my bees in the sixties, when they seemed to put "honey everywhere." Somehow these good old seasons seem to have passed away for ever.

Coming to '94, I was away at the "Royal" show at Cambridge when the stock—with hiver attached—swarmed, and as I did not get back till late at night, no examination was made till the following morning, when I found about 1½ lb. of bees snugly ensconced between three frames. Had I been at hand to move the parent stock away and place the new hive on the old stance so soon as the swarm had joined the queen, I am sure it would have been a success. As it was, I moved the old hive some paces away, thinking to get the same result, but it failed, owing, maybe to the altered appearance of the hive-front after removal of the "hiver," or to my leaving the latter still attached to the parent hive. Anyway, the bees of the swarm eventually discovered the old home—passing several hives in finding it—and again took possession.

Despite these failures, there is no doubt that bee-keepers who only work a few hives, and are away from home, must find such hivers a great boon, as relieving from such troubles as swarms clustering in an unfriendly neighbour's garden, or—worse still—going off to parts unknown. — JOHN WALTON, *Weston, Leamington, December* 15.

BEE-DOINGS IN NORTH HUNTS.

[2152.] I began the year 1894 with about forty hives, nuclei and stocks, having lost only one the preceding winter, and that one through a bad-leaking roof. I have, however, prevented that mischief in future by purchasing ten sheets of thin zinc (6 ft. by 2ft. 6 in.), and cut it up according to size of my hive roofs. By turning up the corners and using a few small brads it was soon fixed, and after a coat of paint the job was finished, so well that not a drop of water has passed through since, notwithstanding some soaking rains. A friend of mine at St. Ives had the whole of his apiary floated away to the sea (the river rose 7 ft. above the usual height). This is the only case I have heard of damage to bees through the floods in this part of the country.

Bees have done very well where attended to, but the skeppists have fared badly. I have driven about sixty skeps this year, but only came across three lots where there was any quantity of honey, and these were very early swarms, and strong in numbers.

I have only taken an average of about 20 lb. of surplus from each hive, for on no conditions do I ever extract from the brood-nest. But my bees have gone into winter-quarters with plenty of food, and a good cake of candy over each feed-hole to keep their hearts up, whether they required it or not. I like to be on the safe side, and am very glad I have been so this year, as there is a great draw on the food so far this winter. The weather up to the present has been so mild and spring-like that I am afraid we shall hear of a lot of losses in the spring.

While writing I can hear the church bells, and their merry ring seems to say, "Peace and goodwill to all men," so, wishing all bee-keepers a merry and happy Christmas, and may brotherly love continue.—R. BROWN, *Flora Apiary, Somersham, Hunts, December* 19.

EXPERTS' VISITS.

[2153.] I enclose notice of D.B.K. Association annual meeting, by which you will see that the continuation of sending the RECORD to members is to be discussed. If discontinued I am sure a great many will miss it, cottagers especially, who will not care to pay for it separately, after having the benefits of the Association included for a trifle extra. For myself I would rather give up the Association than the RECORD. I have not had much benefit from it in this, my first year. I was eagerly looking forward to the expert's visit, and received his advice, "intend a call," but did not receive his visit, although he called within six houses from mine. The only visit I received from him being about a week after his advice, and then, at my place of business, as he passed, I suppose, on his way to the station. I notice a complaint of non-visitation in November's RECORD, signed W.C., so there are others beside myself. I do not think it a very good way of promoting bee-keeping, when would-be bee-keepers join associations and are left in the cold in this way.—R. H. C., *Burton-on-Trent.*

MR. WELLS'S REPORT AND BEESWAX.

[2154.]—Will Mr. Wells please state how he manages to get such a lot of wax from his hives? Does he melt up all his combs, and start every year afresh with frames of foundation? In speaking of it to my better-half, she says he must melt all his combs up to get that quantity,—3 lb. of wax for each double stock is a large yield.—JOHN WALTON, *Weston, Leamington, December* 19.

LOCATION FOR A LARGE APIARY.

[2155.] If your correspondent "Castle Hill" (p. 489 of B.J. for December 6) wishes to start a large apiary near London, I should recommend him to such a place as Dorking, or Walton on the Hill (Walton Common), near Betchworth, which is surrounded with clover and heath. Very often, when you have to depend on the fruit bloom, the season is cold and the bees cannot work the blossoms.—J. GREENHILL, *Wimbledon, December* 14.

Queries and Replies.

[1223.] *Borage for Bee Pasture.*—I am thinking of sowing about an acre of borage for the production of honey. 1. How should I proceed, and what quantity of seed will suffice for an acre? 2. The land is rather strong and wet. Will this affect the plants in any way? The field is about 400 yards away from my apiary. 3. Is this distance too great for the bees to do full justice in the way of showing a surplus? 4. What percentage of honey and pollen does lilac and laburnum yield? 5. What kind of a plant is figwort, and where could it be procured?—PRODUCE, *Ferry Hill, December* 18.

REPLY.—With an acre of land to cover we should make three or four sowings for succession at intervals of about one month, beginning with March or April. Sow in drills 18 in. to 2 ft. apart. The plants flower in from five to six weeks in summer, but spring-sown seed takes longer. The seedsman from whom you purchase will say how much seed to an acre. 2. The plant does not seem very fastidious as to soil, but hot, dry weather brings out its best qualities as a bee-plant, beyond the fact that it is one of the few flowers that bees work on in wet weather, because of the pendant bloom hanging downwards. 3. No. 4. Both lilac and laburnum are worthless as bee-flowers. 5. In some places bees work hard on and gather a large quantity of nectar from figwort, while in others we have heard complaints of them not visiting it for honey. You might make trial of a small quantity, and see how it does for your bees. Wet land suits it well. Messrs. Sutton, of Reading, will supply it.

Notices to Correspondents and Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

W. J. H. (Congleton).—*Wide Ends for Standard Frames.*—We should certainly not advise working standard frames in surplus chambers with "wide ends." No doubt the shallow frame does very well for extracting when worked at the 2-in. distance, but for many reasons we should keep standard frames at the usual distance apart.

JAS. KITCHEN (Barrow-in-Furness). — Since the letter referred to appeared (2126, p. 483) Mr. Miller has written to say that the word "Symington" in sixth line of second column should have been Simmins.

LA RUCHE (Wakefield).—The chemicals used in the manufacture of beet-sugars are considered to have a more or less injurious effect on bees when given as food. On this account pure cane-sugars are much preferable for the purpose.

BRITISH BEE-KEEPERS' ASSOCIATION.—Referring to the fourth paragraph of the Educational Sub-Committee's report, on p. 502 of our last issue, the words "with little exception" should read with *one* exception.

Several articles, letters, &c., are in type and will appear next week.

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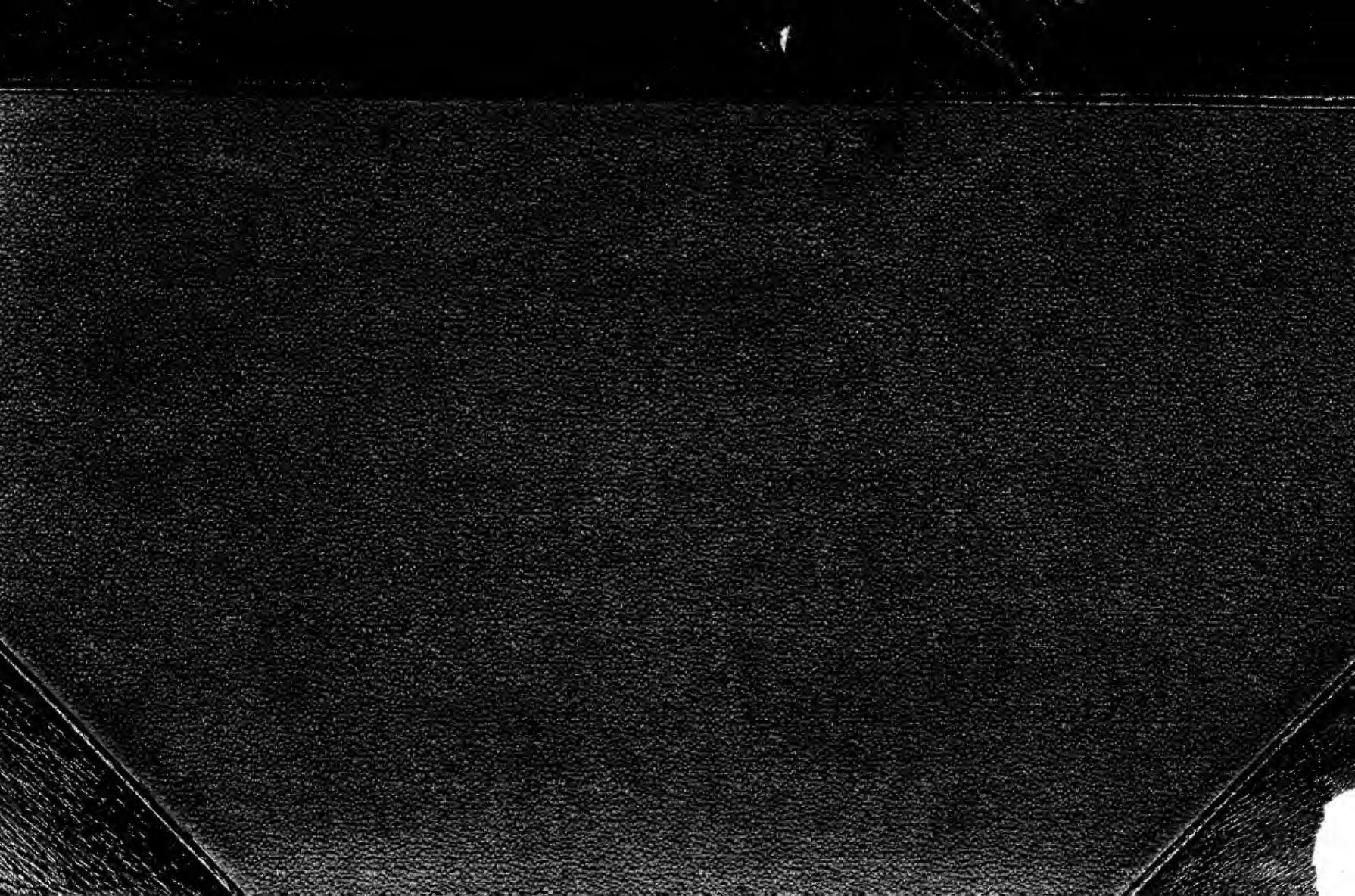
POTTERS-BAR, MIDDLESEX